Building on Knowledge,
Investing in People:
Higher Education
and the Future
of Ohio’s Economy
Tragically, one of the Commission’s most contributory members, Mr. H. Peter Burg, died during the course of the Commission’s work.
The Commission urges all Ohioans to embrace and support this VISION for the betterment of the state and its citizens:

Ohio will achieve higher education's full potential to create more and better jobs for the state's citizens, increase economic competitiveness, and fuel economic growth.

April 29, 2004
In his June 3, 2003, charge to the Commission, Governor Bob Taft acknowledged that Ohioans face a dilemma. He said:

“Higher education is more important to our economic future than ever before, yet our resources are limited. It is therefore imperative for the state to establish policies that secure a maximum return on our public investment in higher education.

It is an established fact that higher learning leads to higher earnings. It also is clear that Ohio’s per capita income has fallen below the national average. Employers offering higher paying jobs require more educated workers with the ability to learn new skills throughout their careers. Ohio’s success in the knowledge economy depends on growing our research base in fields that are relevant to present and future economic opportunities.”
The Governor directed the Commission to consider three issues relating to the purpose and value of higher education:

**Issue #1:**
**MAKING OHIO COMPETITIVE IN THE KNOWLEDGE ECONOMY**

The first issue deals with the role of higher education in making Ohio competitive in the knowledge economy. When institutions of higher education endow students with knowledge and prepare them to be lifelong learners – to be people who continuously upgrade their knowledge and skills – the state has the human capital needed for economic growth.

In this context, the Governor asked the Commission to examine the needs of students, employers, and the economy as they relate to higher education. He directed the Commission to look at how state-supported research at Ohio's colleges and universities benefits the economy – and how those benefits can be magnified. And he asked the Commission to consider how institutions of higher education should be held accountable for meeting the state's expectations.

**Issue #2:**
**PROMOTING ACCESS AND CREATING OPPORTUNITIES FOR ALL STUDENTS**

The second issue focuses on student access, opportunities, and success. Making higher education available to large numbers of citizens is a critical component of preparing Ohio to succeed in the knowledge economy. However, access alone is not sufficient. To increase their opportunities for professional fulfillment, growth, and earnings, students must succeed in their postsecondary education goals.

In this context, the Governor directed the Commission to search for promising ways to attract and enable more students to participate in higher education – and for strategies that P-12 schools, colleges, and universities can use to ensure students are successful in college. And he urged the Commission to determine what interest and role the state has in increasing access to higher education for students from low-income and minority families.

**Issue #3:**
**DELIVERING RESULTS FOR PUBLIC INVESTMENTS**

The third issue centers on the structure, governance, and financing of higher education, questioning how state support for higher education can best be directed to promote the State of Ohio's goals and expectations. It directed the Commission's attention to the geographic distribution and patterns of collaboration and competition among Ohio's colleges and universities – and to the governance structures of these institutions.

In this context, the Governor urged the Commission to identify the appropriate roles for competition and collaboration among Ohio's colleges and universities and to examine organizational structures and funding mechanisms that could enhance institutions' capacity to meet the state's long-term needs and promote economic growth. He asked the Commission to include consideration of the role of Ohio's private colleges and universities in its deliberations. Finally, the Governor directed Commission members to examine the role of the Ohio Board of Regents in overseeing and setting higher education policy and to recommend ways to better integrate the services offered by Ohio's two- and four-year colleges and universities and adult workforce education centers.
In June 2003 Governor Bob Taft convened the Commission on Higher Education & the Economy, which is the third commission the Governor formed to study, and make recommendations about, education policy in Ohio. The first was the Commission on Student Success, which was chaired by William F. Patient and presented its report to the Governor on December 14, 2000. The second was the Commission on Teaching Success, which was chaired by W. G. Jurgensen and issued its report on February 20, 2003.

This Commission was chaired by Richard W. Pogue, former Managing Partner of Jones Day, and consisted of 33 Ohioans who came from a variety of professional backgrounds:

- Nine senior officers of educational institutions
- Nine individuals from business and commerce
- Six members of the Ohio General Assembly (three from each Chamber)
- Four state government officials
- Four representatives from the Ohio Board of Regents, including the Chancellor
- One Congressional aide who served as Director of Cabinet Affairs for former Ohio Governor George Voinovich

The Commission’s staff work was led by Katherine Canada, Ph.D.

The Commission benefited from its members’ diversity of backgrounds and experiences, which was reflected in the points of view that
were voiced throughout its deliberations. Accordingly, the Commission process was designed to produce broad agreement, rather than unanimity on every point. Readers of this document should not assume that every member concurs with every one of the Commission’s recommendations. However, the Commission reached broad consensus on the report as a whole in its response to the challenge presented by Governor Taft – to recommend what should be done to achieve higher education’s full potential for fueling economic growth and creating more jobs in Ohio.

From the beginning of its work in responding to the Governor’s charge, the Commission recognized that its assignment was more limited than a survey of all issues affecting higher education. Guided by the final qualifying words of its title (i.e., Commission on Higher Education & the Economy), the Commission focused on ways in which higher education can better serve the economy of the state. Similarly, the Commission recognized that many factors beyond higher education influence economic performance, but these were outside the Commission’s charge.

From June 2003 through March 2004, the Commission held seven public meetings of the full Commission and nine public committee meetings – three for each of the Commission’s three committees:

- Economic Competitiveness, which was co-chaired by Roy Church and Linn Draper.
- Access and Success, which was co-chaired by Kim Goldenberg and Jerry Tatar.
- Delivering Results, which was co-chaired by Edmund Adams and James Tuschman.

The six committee co-chairs and Chairman Pogue constituted a Steering Committee of the Commission, which met several times to ensure integration among the work of the committees and to keep the Commission’s work on schedule.

To inform its work, the Commission relied on presentations from expert consultants here in Ohio and from across the nation, as well as staff support from the Ohio Board of Regents. Dr. Stephen R. Portch, Chancellor Emeritus of the University System of Georgia, served as a primary consultant, and the Commission benefited from his experience and wisdom.

At each of its committee meetings, the Commission allotted time for individuals and organizations interested in sharing their comments. In December 2003 the Commission invited presentations from three key constituencies in the state – the Ohio Association of Community Colleges, the Association of Independent Colleges and Universities of Ohio, and the Inter-University Council of Ohio, which represents the public universities and freestanding medical schools. In February 2004 the Commission shared some of its ideas with, and invited feedback from, trustees of colleges and universities in eight regional meetings around the state. And, from time to time, the Chairman briefed the Governor on the Commission’s process.

The range of facts, opinions, and perspectives that the Commission heard from these multiple sources advanced the group’s understanding of higher education and the economy in Ohio and ultimately helped shape the recommendations in this report.
Ohio’s System of Higher Education: A Profile

Ohio has a diverse array of colleges and universities authorized by the Ohio Board of Regents to confer academic degrees. In this report, the term “public” refers to state-chartered institutions that receive a substantial part of their operating revenues from the state; “private” refers to independent, not-for-profit institutions; and “proprietary” refers to for-profit institutions of higher education.

FOUR-YEAR COLLEGES AND UNIVERSITIES

There are 75 four-year institutions of higher education:
- 13 public universities
- 2 freestanding public medical colleges
- 58 private colleges and universities
- 2 national proprietary universities

The locations of the four-year institutions are shown on the adjacent map.
There are 49 two-year institutions of higher education:

- 24 public community and technical colleges
- 23 regional branch campuses of public four-year universities or colleges
- 2 private institutions

The locations of the two-year campuses are shown on the adjacent map.

In addition to the two- and four-year colleges and universities identified on these pages, the Ohio Board of Regents authorizes a number of institutions to offer individual courses in a variety of fields and specialized programs in fields such as nursing and podiatric medicine.

Ohio also has 41 adult workforce education full-service centers that provide training and support for the state’s adult population. As the Commission reviewed higher education in Ohio, it discovered that although there are examples of partnerships between colleges and universities and the adult workforce education system, there are many more opportunities for collaboration. Throughout its report, the Commission calls for better linkages between the adult workforce education system and the state’s colleges and universities.

Finally, Ohio has more than 40 two-year proprietary institutions, which are authorized to grant degrees by the Ohio State Board of Career Colleges and Schools.

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1 A listing of all degree programs authorized by the Board of Regents is available by accessing www.regents.state.oh.us/students_parents.html and clicking on “Program Authorization Log.”
A new economy driven by knowledge and innovation has emerged in Ohio and the nation. It is transforming the agricultural and manufacturing sectors that have dominated our state for the past 200 years. Through the development of innovative technology and knowledge-based businesses, it is reshaping Ohio’s economic landscape – changing the way we do business and redefining the forces that contribute to economic success.

In this new economy, knowledge is imperative. The foundations of success were once identified by the control of natural resources, labor, and capital; the principal drivers of sustainable economic growth today are knowledge and innovation.

This is why, on the national level, Federal Reserve Board Chairman Alan Greenspan has cautioned, “If we are to remain preeminent in transforming knowledge into economic value, America’s system of higher education must remain the world’s leader in generating scientific and technological breakthroughs and in meeting the challenge to educate workers.”

For Ohio this kind of economic transformation is a source of both concern and opportunity.
THE NATURE OF THE PROBLEM

Today our state is losing ground in training knowledge workers and in creating the high-skill, high-wage jobs that will be used to measure our prosperity in the 21st century. Only 11 states have a smaller portion of their populations who have earned baccalaureate degrees. And Ohio's per capita income – once safely above the national average – has declined steadily during the past 40 years to the point where today it is lagging most of the nation.

As members of the Governor's Commission on Higher Education & the Economy launched their study of this problem – and began their search for solutions – Stephen R. Portch, Chancellor Emeritus of the University System of Georgia and the Commission’s principal consultant, reported, “The good news is that Ohio is average. The bad news is that Ohio is average.”

Dr. Portch’s message was clear: In a global economy, average is not competitive. The states, regions, and nations that generate new knowledge, innovations, and a ready supply of well-educated, highly skilled citizens will be the winners in the knowledge- and innovation-based economy.

Dr. Portch’s concern for Ohio’s future economic prosperity is confirmed by a 2002 report from the Battelle Memorial Institute entitled An Ohio Technology-Based Economic Development Strategy, which can be accessed on the Web at http://www.ohio3rdfrontier.org/. This study points to Ohio’s concentration of larger, older, and traditional industries that are no longer leaders in the design and development of new products. It demonstrates that Ohio is not a leader in new-firm formation and new-product innovation – just as it is not a pacesetter in entrepreneurialism, which is a crucial component of a dynamic, fast-paced technology sector. And it documents Ohio’s delayed commercialization of technology from its research universities and its failure to provide sufficient employment opportunities for advanced-degree workers from the state’s colleges and universities.

But the Battelle report and other research studies tell us that there is reason for optimism. Yes, Ohio is behind in building a knowledge- and innovation-based economy. But there are substantial opportunities for manufacturing modernization, faster business growth, higher wages, and the development of a globally competitive economy that will establish Ohio as a leading applied-innovation state.

The message found in virtually all of these studies is the same: Ohio’s future prosperity – its competitiveness in this new economic environment – demands that we do a better job of maximizing higher education’s potential for fueling economic growth. It requires strategic investments that enhance colleges’ and universities’ capacity to educate more Ohioans and to do it better; to generate scientific and technological breakthroughs; and to turn great research into leading-edge products, processes, and services that reach the marketplace.

THE NATURE OF THE SOLUTION

At the beginning of a new century, this is Ohio’s most critical challenge. But the task of building a knowledge-driven economy by maximizing higher education’s potential for generating new ideas, innovative products, and better trained workers cannot be left to chance.

Positioning Ohio among the winners will require a number of changes directly affecting the colleges and universities in the state – changes in the current accessibility of higher education and advanced training for Ohio citizens, changes in the magnitude and strategic
allocation of our higher education funding, changes in the relationships among institutions of higher education, and changes in the relationship between higher education and the constituencies it serves.

This challenge must be pursued systematically. It must be fostered and nurtured through a culture that celebrates change, and it must be sustained by incentives that reward performance and make accountability for results a priority. It is an opportunity that must be seized if we want to be winners in the 21st century economy and if our state leaders are serious about keeping Ohio competitive and prosperous for future generations of Ohioans.

This report proposes ways in which Ohio’s institutions of higher education can be more effectively leveraged to stimulate economic growth, providing a better return on the state’s investment in this area.

Understanding the Cultural Debate

In the early months of its work, the Commission became aware of an intense national debate about higher education and experienced the debate in its own deliberations. Understanding and navigating this debate were essential components of the Commission’s work.

In a 1998 report – *Straight Talk about College Costs and Prices* – the National Commission on the Cost of Higher Education foretold an impending crisis. The report warned that funding strategies for higher education and escalating costs and prices within higher education, if not addressed, would create an environment of mistrust between institutions of higher education and the publics they serve.

In September 2003, three months after Governor Taft’s Commission on Higher Education & the Economy started its work, U.S. Representatives John Boehner (Ohio) and Howard J. “Buck” McKeon (California) issued a report entitled *The College Cost Crisis: A Congressional Analysis of College Costs and Implications for America’s Higher Education System*. The Boehner-McKeon report argues that America’s higher education system is in crisis due to exploding college costs and prices that outpace the rate of inflation, increases in family income, and increases in state and federal financial aid.

Some representatives from higher education are critical of the Boehner-McKeon report, questioning the quality of the research and the fundamental assumption underlying the report – i.e., that colleges and universities should be run like businesses. They also assert that the report ignores the critical distinction between “price” and “cost.”

The Commission conducted its work in the context of this “cultural debate” in which colleges and universities decry cuts in higher education funding and call for increased state investments, while legislators and governors call for cost containment, better efficiencies, and better return on the investment of higher education funding. During the course of the Commission’s work, various Commission members, the media, and business leaders emphasized one or the other of these points of view, and aspects of the debate peppered our discussions.

The Commission knew, however, that becoming embroiled in the debate would not distinguish Ohio from any other state. It would have made Ohio, once again, merely average. So, the Commission tried to use the tensions that define the debate constructively to pose questions to the experts who testified before the Commission, to guide reviews of the relevant literature, and ultimately to craft policy recommendations.
The financing, cost, and pricing of any public enterprise can be expected to generate debate, and the higher education arena is no exception. But the debate about higher education is not merely about money. As Anthony Carnevale from the Educational Testing Service explained when he spoke to the Commission’s Economic Competitiveness Committee, the cultural debate represents frustration over an educational system that was not designed to meet current and future demands.

As a nation, we are frustrated because the educational institutions and practices that we created to serve our agrarian and industrial economies will not meet the needs of the emerging knowledge- and innovation-based economy or of future economic shifts. The Commission reached a consensus belief that the past practice of providing higher education to a small, select portion of the population must be replaced with a commitment to providing higher education to more citizens, including those who historically have not participated in higher education. This commitment reflects an understanding that higher education is necessary for success in a diverse, democratic society just as it is required to ensure Ohio’s economic competitiveness in the 21st century.

It became clear during the Commission’s discussions that the fault line of the cultural debate disappeared when there was a focus on a shared vision and bold goals for Ohio’s future. Regardless of the diverse opinions Commission members held about the costs, prices, funding, and efficiency of higher education, the Commission reached agreement that securing a prosperous future for Ohio will depend on maximizing the potential of Ohio’s higher education institutions for fueling economic growth, increasing economic competitiveness, and creating more jobs in Ohio.

The Commission realized that attempting to declare a “winner” in the cultural debate would not help Ohio achieve bold goals for the future. Success will require that three stakeholders – state government, higher education, and business leadership – create a “compact” for moving forward. The impact of the compact will depend on all parties’ willingness to participate – to give up part of their own agendas to achieve future goals for Ohio – and on their ability to maintain focus on shared statewide objectives.

**Measuring Higher Education’s Economic Impact**

Ohio’s colleges and universities have a significant impact on the state’s economy. Some of their contributions, particularly those that stimulate economic growth and job creation, can be easily quantified and are readily recognized and valued. Other contributions, however, such as the longer-term economic dividends of high-quality teaching and community-based service programs that improve the quality of life for individuals and families, are more difficult to measure.

The State of Ohio has not conducted a full-scale analysis of higher education’s contributions to the state’s economic vitality and to the...
prosperity of the communities served by these institutions. Yet, studies carried out in other states have consistently found these impacts to be significant. For example, in December 2000 the Texas Comptroller of Public Accounts reported that her state’s institutions of higher education received approximately $4.6 billion annually in state general revenue and local property taxes. She observed:

> “Every dollar invested in the state’s higher education system returns more than $5 for the Texas economy. This is a remarkable return, even for a high-stakes technology startup. But when it comes to the Texas higher education system, the stakes are much higher. For here, we are investing in our most important venture – the future of young Texans.”

There is no reason to think that higher education’s contributions to Ohio’s economic vitality are any less impressive – an expectation that is supported by several partial studies.

In 2003 the Inter-University Council of Ohio, which represents the state’s 13 public universities and 2 freestanding medical colleges, documented that its member institutions spent $5.92 billion for operations and capital projects in FY 2001. The source of these dollars included state support, student tuition and fees, hospital and other auxiliary operations, federal grants and contracts, and private gifts and endowments. During that year, student and visitor spending was estimated at $3.14 billion. The study also found that more than 105,400 full- and part-time jobs for Ohioans were directly attributable to the state’s public universities and medical colleges, and that these institutions’ in-state purchases and capital expenditures created an estimated 40,000 additional Ohio jobs during Fiscal Year 2001.

While comparable data are not readily available for the state’s two-year community colleges, a 2002 analysis of the socioeconomic benefits of just one of these institutions – Columbus State Community College – documented that the institution’s operations contribute $79 million a year directly and indirectly to Central Ohio’s economy, and that the increased wages and spending of the college’s graduates added another $170 million a year to the region’s economy.

Similarly, in 2002 the 52 members of the Association of Independent Colleges and Universities of Ohio employed nearly 28,000 people and spent $1.58 billion on instruction, research, academic support, student services, and student financial aid.

In assessing higher education’s long-term economic dividends, it is not enough to focus on current operating revenues and capital expenditures, spending by employees, student and visitor spending, and direct or induced employment. We also must acknowledge – and take advantage of – higher education’s tremendous capacity to fuel Ohio’s economic engine. And we must seize this opportunity to build on knowledge and invest in people strategically and aggressively.

The Commission’s recommendations are the key elements of Ohio’s strategic response to this challenge. The goals and strategies are tightly aligned to a well-defined vision of a state that maximizes higher education’s potential for fueling economic growth, increasing economic competitiveness, and creating more jobs for our citizens.

In the following pages, each recommendation is presented in detail, but the Commission invites readers to consider them as four core elements:
**Energize business leadership.** To move Ohio off the “cultural debate” and into more effective utilization of higher education’s tremendous assets for the economic betterment of the state, the Commission urges that a “third party” – one with a stake in the process and outcome and a stance of relative neutrality and objectivity – be asked in a formal way to work with higher education and state government to the advantage of all.

**Provide more Ohioans with the knowledge and skills to succeed.** The Commission calls for actions that will give many more Ohioans the knowledge and skills needed to succeed in the knowledge- and innovation-based economy by increasing their awareness of the value of education; raising their aspirations for learning beyond high school; improving academic preparation at all levels, especially in science and mathematics; and reducing the financial barriers to higher education. The Commission also calls for changes that will remove the barriers that too often prevent students of all ages from moving among Ohio’s colleges and universities – and between these institutions and other providers of workforce development services – as they prepare themselves for the challenges of an increasingly global and technology-based economy.

**Strengthen higher education’s research base.** To create jobs and spur economic growth, the Commission calls for actions to build higher education’s capacity to conduct and participate in cutting-edge basic and applied research, particularly in areas defined by Ohio’s Third Frontier project. The Commission also calls for policy changes that help businesses and entrepreneurs turn university-based research into technology-driven products, processes, and services that reach and succeed in the marketplace.

**Strengthen accountability.** The Commission calls for a series of changes that are designed to strengthen higher education’s accountability for delivering value for the State of Ohio’s investments and for contributing to economic growth. Central to the thinking in this area is the call for a “compact” among state government, higher education, and the business community that will help the state achieve the goals of better educating more Ohioans and enhancing the quality and competitiveness of university-based research and technology transfer and commercialization.

Ohio must promote high-quality education – preschool through college. Our state must offer lifelong learning opportunities; achieve high participation rates in postsecondary education; and develop highly ranked, university-based research programs in key technology sectors.

This can only be accomplished if public officials, leaders in higher education, and the state’s business leaders are fully engaged partners in the effort to capitalize on higher education’s potential for driving economic growth. This challenge has been enthusiastically accepted in other states that today are leading the way in the knowledge- and innovation-based economy. It is an opportunity that Ohio’s leaders also must seize.

Commission members are grateful to Governor Bob Taft for the opportunity to serve our state. The experience has deepened our collective understanding of the challenges and opportunities that face Ohio, our economy, and our institutions of higher education. The Commission respectfully presents these recommendations with the conviction that the actions they inspire will strengthen the state’s economy and improve the quality of life for Ohio citizens.
Throughout its deliberations, the Commission was reminded again and again that the focus of its work was not the broad range of issues involving higher education, but rather those affecting higher education and the economy. The importance of this linkage cannot be overstated. Moreover, the very nature of the linkage points the way toward one of the core strategies the Commission has identified for responding to Governor Taft’s charge to make better use of Ohio’s colleges and universities as engines for economic growth.

The principal driver of the policies recommended by the Commission is the 21st century economy. Innovative technologies and knowledge-based businesses are reshaping the economic landscape and, in the process, are redefining the factors that contribute to economic success. One of those factors is the capacity of higher education to discover, disseminate, and commercialize new knowledge. The core public policy challenge is how to leverage fully and strategically the state’s colleges and universities to position Ohio to compete more effectively in the new knowledge- and innovation-based economy.
The Commission believes that the key to responding to this economic imperative is leadership from the state’s business community.

Ohio must have strong leadership, involvement, and support from the state’s business leaders to ensure, first, that the state has the technology, talent, and capital required to compete in the “new economy,” and second, that the strongest possible links are forged among university research, business and industry needs, and marketplace opportunities. No stakeholder is better positioned to ensure that Ohio (a) builds the world-class, university-based research centers needed to commercialize ideas and innovations and to create new jobs and (b) develops the workforce capacity needed to enhance economic competitiveness.

Those states that have been most successful in seizing the opportunities presented by the “new economy” have done so with economic development strategies in which colleges and universities play enhanced and central roles – and with strong leadership from, and active involvement of, the business community. The success of Georgia’s Research Alliance and North Carolina’s Research Triangle, in particular, relied heavily on business playing a major role in leveraging higher education as an economic development asset and in expanding the state’s knowledge-generating and high-tech research capabilities.

The Commission is concerned that without strong leadership from its business community, Ohio will fall further behind those states and others in the race for economic leadership. Without strong leadership from the business community, Ohio will not fully capitalize on the state’s higher education resources as an engine for economic growth and enhanced economic competitiveness. It is the Commission’s strong belief that focused business leadership is essential to crafting an effective and intentional strategy for building the talent pool Ohio needs for success in the knowledge economy and for creating and strengthening business-university research collaborations that drive economic activity and create jobs.

Business leadership has had an important role in Ohio’s P-12 educational arena, where the Ohio Business Roundtable’s sustained advocacy for standards-based reform – including the creation of Battelle for Kids – has made a difference in increasing Ohioans’ awareness of the need for higher academic standards and achievement. In the field of higher education, the Business Roundtable’s leadership of the World-Class Ohio initiative supported technology-based economic growth as part of the state’s Third Frontier Project.

Thus, the centerpiece of the Commission’s recommendations is a strong call to create a business-led entity to provide the statewide leadership needed to ensure that Ohio’s colleges and universities support economic growth by what they do in the classroom, in the research arena, and in campus-based programs and services that spur entrepreneurial activities and promote strong local and regional economies. No greater economic development priority exists for Ohio, and therefore no recommendation in the Commission’s report is more critical than the call to create and sustain this core business-leadership function and mechanism.

The Commission believes that the key to responding to this economic imperative is leadership from the state’s business community.
RECOMMENDATION: Establish a private sector-led Ohio Business Alliance for Higher Education & the Economy to serve as a catalyst, mediator, and advocate for an enhanced and more strategic role for Ohio’s colleges and universities as contributors to the state’s economic growth.

Implementing the recommendations contained in this report requires large-scale change. It depends upon a clear vision of an Ohio in which higher education plays a robust role in helping to create more jobs for the state’s citizens and in fueling economic growth and increased economic competitiveness. It demands a new understanding of what Ohioans expect of their colleges and universities, just as it requires new strategies for achieving those expectations.

Getting this kind of change started is often the biggest challenge. But getting started only plants the seeds for change. Over time these seeds need to be cultivated, and then momentum needs to be established and sustained.

For this purpose the Governor should challenge Ohio’s business leaders to create an Ohio Business Alliance for Higher Education & the Economy. After consultation with the Ohio Business Roundtable, the Governor should appoint the initial members from among the membership of Ohio’s major business associations and the entrepreneurial sector of Ohio’s business community. After the organization is established, new members should be appointed by the Business Alliance in consultation with the Governor.

The Business Alliance should provide statewide leadership to promote stronger collaborations between higher education and business for the purpose of ensuring that higher education plays a significant role in contributing to the economic growth of the state. In particular, it should work closely with the Ohio Workforce Policy Board to ensure that its work is complementary and not duplicative.

Finally, this new Business Alliance should represent the business community in the accountability compact being proposed by this Commission in Recommendation 9 and should monitor and comment on the progress of the implementation of the recommendations contained in this report.

1 Ohio’s major business associations, in addition to the Ohio Business Roundtable, include The Ohio Manufacturers’ Association, Ohio Chamber of Commerce, Ohio Farm Bureau Federation, Ohio Council of Retail Merchants, and National Federation of Independent Business-Ohio.
Ohio will achieve higher education’s full potential to create more and better jobs for the state’s citizens, increase economic competitiveness, and fuel economic growth.

**GOAL #1:**
Provide more Ohioans with the knowledge and skills they need to succeed in the knowledge- and innovation-based economy.

**STRATEGIES TO ACHIEVE GOAL #1**

1. Increase the number and proportion of Ohioans who participate and succeed in higher education. (p.21)

2. Increase the number and proportion of Ohioans with mathematics and science knowledge, skills, and degrees. (p.26)

3. Create a more user-friendly network of postsecondary institutions that will make it easier for students to apply to and transfer among Ohio's colleges and universities. (p.28)

4. Require Ohio's two-year public colleges and university branch campuses, adult workforce education full-service centers, local workforce policy boards, and One-Stop Regional Workforce Advisory Councils to work as partners in improving the skills of Ohioans already in the workforce. (p.29)

**GOAL #2:**
Create more jobs and economic growth by strengthening higher education’s research base and ability to develop and bring to market new ideas and innovations.

**STRATEGIES TO ACHIEVE GOAL #2**

6. Attract and retain more preeminent researchers to maximize the world-class research, innovation, and technology-commercialization capacities of Ohio’s public and private institutions of higher education to drive economic growth and create jobs. (p.32)

7. Assist Ohio businesses and entrepreneurs with turning university-based research into technology-driven products, processes, and services that reach the marketplace and expand employment opportunities in Ohio. (p.36)

**STRATEGIES TO STRENGTHEN ACCOUNTABILITY**

8. Enhance the Governor’s higher education leadership role and support the work of public college and university trustees in ways that will advance higher education’s role in economic development. (p.39)

9. Forge a compact among higher education, the business community, and state government to strengthen accountability for increasing college participation and expanding research and commercialization. (p.40)
Seizing economic opportunity begins with human and intellectual capital. The Commission recognizes that there is no more valuable economic development tool than a reliable and ample supply of knowledgeable, highly skilled workers prepared to learn continuously on the job and throughout their careers. That is why one of the two major goals the Commission’s policy recommendations are designed to achieve is to provide more Ohioans with the knowledge and skills they need to succeed in the knowledge- and innovation-based economy.

In today’s economy, it is increasingly clear that learning in and beyond high school is not optional – it is essential. New knowledge is being created at an unprecedented rate. New technologies are transforming old jobs and creating new ones. The new economy is reinventing the workplace and redefining the knowledge and skills workers must have to succeed.
The Commission believes that this reality has huge implications for how Ohio educates its citizens – not only those enrolled as students in the state’s elementary schools, high schools, and postsecondary institutions, but also those Ohioans already in the workforce and on the job.

Indeed, the latter group – adult learners – must not be overlooked. According to a recent demographic audit conducted by the National Center for Higher Education Management Systems, a substantial majority of Ohio's forecasted 2010 workforce already was in the workforce by 2000. In a world where new knowledge is being created at a dizzying pace and technology-driven innovations change workplace requirements frequently and sometimes dramatically, lifelong learning has never been more important.

There also is an economic rationale for being concerned about the educational levels of the citizens of Ohio. The research is absolutely clear: There is a direct correlation between educational attainment and employability and earning power. In 2000, the median annual income for an Ohioan with a high school diploma or GED was under $22,000, while the median income for an Ohioan with a bachelor’s degree was between $35,000 and $40,000. According to national data compiled by Tom Mortenson of Postsecondary Education OPPORTUNITY, the median annual income in 2002 was $29,800 for individuals with a high school diploma, $48,896 for individuals with a bachelor’s degree, and $77,216 for individuals with a doctorate. Conversely, the unemployment rate in 2003 was 5.5 percent for individuals with only a high school diploma, 3.3 percent for individuals with a bachelor’s degree, and 2.1 percent for individuals with a doctorate. Conversely, the unemployment rate in 2003 was 5.5 percent for individuals with only a high school diploma, 3.3 percent for individuals with a bachelor’s degree, and 2.1 percent for individuals with a doctorate.

And yet Ohio citizens are not getting – or not heeding – this message.

The undeniable fact is that Ohio is not producing enough educated, highly skilled workers to meet the demands of a knowledge- and innovation-based economy.

While Ohio’s high school graduation rate is above the national average, its college-participation and postsecondary degree-attainment rates are below the national average. According to the Ohio Board of Regents, in 2000 Ohio ranked 36th among states for the percentage of its population aged 18-34 enrolled in some type of postsecondary education. With regard to college graduation, in 1990 Ohio ranked 39th in the nation for the percent of its population with a bachelor's degree (17 percent). By 2000, that figure had risen to 21.1 percent – but Ohio still ranked 39th and the national average was 24.4 percent.

In other words, Ohio is falling behind the rest of the nation. In an economy that places premium value on ideas and innovation, where knowledge is the currency of economic growth, Ohio is in relative terms becoming less educated and thus less competitive. If this trend is not reversed, Ohio will become increasingly less competitive as a state.
Because individuals with higher levels of education earn more income and pay more taxes, the impact on the state of low educational attainment levels can be profound. Ohio's low college-attainment levels relative to other states is one reason the state's per capita income has fallen from well above the national average in the 1960s to just below the national average today. In 2002 Ohio's per capita income was about $1,500 less than the national level, reflecting an aggregate cost to the state of $17.5 billion in total lost personal income.

The challenge confronting state policy makers is defined not just by the question, "How much education do Ohioans need to succeed and prosper?" but also by the concern, "What kind of education do Ohioans need to succeed and prosper?" According to a labor-supply report prepared for the Commission by Dr. Paul E. Harrington of Northeastern University, Ohio is not producing enough science, technology, engineering, and mathematics graduates who are needed by information-based businesses, computer-related enterprises, and technology-intensive manufacturing industries that are the engines of economic growth in today's world. On the other hand, states such as Florida, Georgia, and North Carolina, as well as a number of states in the west central mountain region, have intentionally devised strategies to produce graduates in those areas so that they are positioned to take full advantage of an economy increasingly dependent on technology and innovation for economic growth.

Data reported by the National Center for Public Policy and Higher Education are particularly troublesome with regard to mathematics and science, which are critical areas in a technology-driven economy. Ohio's eighth-graders perform near the top nationally on mathematics and science achievement tests. In spite of this high performance, high school students in Ohio appear to be staying away from upper-level math and science courses (47 percent take at least one upper-level mathematics course compared to 57 percent in the top states; only 20 percent take an upper-level science course compared to 39 percent in the top states).

Without an ample supply of workers with the knowledge and skills required for success in a technologically sophisticated workplace, Ohio will not garner its share of the nation's employment growth and economic expansion resulting from the increased demand for high-technology goods and services.

The Commission identified a number of reasons for Ohio's comparatively low levels of postsecondary education participation and degree attainment:

- **Lack of awareness.** Despite the clearly demonstrated link between education-attainment level and earning power, too few Ohioans are aware of the connection and too few aspire to and attain postsecondary education.

- **Inadequate academic preparation.** A large number of Ohio's citizens, including high school and college and university graduates, are not developing the knowledge and skills – particularly the mathematics and science skills – that are essential to success in the 21st century. The historic use of education as a "sorting process" to find and cultivate only a small number of the most talented students does not match the current and future needs of our state.

- **Lack of P-16 alignment.** Ohio's P-12 schools, adult workforce education providers, and higher education institutions do not form a seamless P-16 system. As a result, there are conflicting expectations about required levels of knowledge and skill at different points along the education continuum, and there are high rates of attrition from our education pipeline.
• **Financial barriers.** Despite well-intentioned efforts of the leaders of Ohio’s colleges and universities and of state legislators, tuition continues to rise and is a growing concern for many Ohioans who fear that a college and university education simply is not affordable or who may be unaware of or confused by the complexities of financial aid.

• **Transferability issues.** Longstanding difficulties – some real, some perceived – in transferring course credits from one institution of higher learning in Ohio to another have made postsecondary education a less convenient and unnecessarily costly option for many Ohioans.

The Commission believes that increasing Ohioans’ participation and success in postsecondary education will improve the state’s economic vitality and competitiveness. Commission members further believe that Ohio should aim high in setting a target – for both undergraduate and graduate enrollment, as well as for incumbent workers engaged in advanced, employment-related, noncredit skill training – against which to measure progress in this area.

Giving a substantially larger number of Ohioans access to higher education will not be easy. It will require a commitment from the state to provide additional resources. It will require a commitment from the state’s colleges and universities to reduce per-student costs through productivity gains. And it will require a more strategic use of the state’s two-year community and technical colleges and university branch campuses.

**RECOMMENDATION:** Increase the number and proportion of Ohioans who participate and succeed in higher education.

To increase per capita income and enable Ohio to be economically competitive with the most successful states, the state must set a bold and ambitious goal – to increase, by the year 2015, undergraduate and graduate enrollment in Ohio’s public and private postsecondary institutions by 180,000 (over Fall 2003 enrollment of 600,000). This would be an increase of 30 percent, or twice the National Center for Education Statistics’ projected rate of national growth in postsecondary education enrollment over the next ten-year period.

Achieving this goal will require a significant increase in Ohio’s college-participation rate. According to data presented to the Commission by the Center for Human Resource Research at The Ohio State University, Ohio’s college-participation rates increased slightly between 1990 and 2000, but still averaged about 1.4 percentage points below the national rate. Performing at twice the national rate of participation in higher education during the next decade will be a formidable challenge because of demographic projections for the state (nearly two thirds of Ohio’s current college students are between ages 18 and 24, yet Ohio’s population in this age range is projected to decline throughout the next decade and beyond) and because of the substantial resources required for educating significantly more Ohioans.

The Commission strongly believes that meeting the challenge will require a solid “compact” among higher education, state government, and the business community. The purposes of this compact should be (a) a commitment of the financial resources required to achieve the increased college-participation goal and (b) reduction of the cost per student through productivity gains at the institutional level and a more strategic use of all of the higher education resources in the state.

For example, in 2002 two-year community colleges and technical colleges accounted for just 47 percent of Ohio’s postsecondary education enrollment compared to the national
average of 60 percent. One strategy for achieving the proposed enrollment-increase goals would be to increase the percentage of Ohio's postsecondary students who are served by two-year campuses, which typically are lower-priced postsecondary options than the state's four-year institutions. Increasing the number of students enrolled in two-year institutions should not, however, lead to a decrease in the number of students enrolled in four-year institutions.

Reaching the bold goal of increasing higher education enrollment by 30 percent over the next decade will require participation increases in all sectors of higher education. The Commission is therefore pleased to include in this report (see page 65) a joint statement from the Inter-University Council of Ohio, which represents Ohio's public four-year universities, and the Ohio Association of Community Colleges, affirming their member institutions' consensus support for the goal of dramatically increasing postsecondary education in Ohio and pledging their initial commitments to achieving that goal.

The Commission also urges the Ohio Workforce Policy Board to examine job-training data for the purpose of establishing a similarly bold and ambitious goal for increasing the number of incumbent workers in Ohio engaged in employment-related, noncredit skill training. For this purpose, the Board should recommend a funding strategy that allows the state to achieve the goal. The funding strategy should include an incentive-based component that requires institutions to match increased state support and that rewards the delivery of quality education.

Ohio's progress toward the enrollment targets should be monitored annually by the proposed Business Alliance for Higher Education & the Economy. As needed, the targets should be modified periodically to ensure that Ohio moves from its current rank of 36th in percent of population aged 18-34 enrolled in postsecondary institutions to a rank in the top ten states by 2015. The specific metrics used to track progress should be developed through a collaborative process involving a range of education stakeholders. Sample metrics that can be used as a starting place for discussion are provided on page 23.

**Increasing awareness and aspirations**

The Commission believes that the state should implement a research-based, decade-long marketing campaign, funded with both public and private dollars, to raise awareness of the value of higher education and continuous learning and to increase aspirations and academic preparation for learning beyond high school. Depending on the market-research findings, the campaign might target (a) students and their families with little or no experience with college participation, particularly low-income and minority groups who have been historically underrepresented in postsecondary education; (b) individuals who already have some college experience but have not earned a degree; and (c) working adults who need to raise their educational level to be more successful and to have more options for advancement in the workplace.

The marketing campaign should emphasize the documented link between level of educational attainment and level of economic prosperity and should encourage Ohioans in the targeted groups to aspire to the highest practical levels of educational attainment. The campaign should be designed to reach learners of all ages, from students in the elementary grades to adult learners. It should blend state-level direction with local grassroots outreach and should be coordinated with the existing marketing efforts of Ohio’s colleges and universities. The campaign also should be coordinated with the services of the Ohio College Access Network.
(OCAN) and integrated with the Ohio Department of Education’s career-development program.

For this purpose the Ohio General Assembly should increase funding for OCAN to achieve the goal of providing local college-access services to every middle-school and high-school student in the state. To support the OCAN philosophy of transitioning local college-access programs to financial self-sustainability, state funding should be contingent on local and/or regional matching funds, and state funding for local or regional services should be phased out to a level of no more than ten percent after ten years.

To ensure the availability of information about careers and the educational requirements for those careers, state legislators should support the Ohio Department of Education’s career-development program by providing license-fee funding to make the Ohio Career Information System (OCIS) available to every middle school and high school in Ohio – and for transitioning the system to an Internet-based platform. The Ohio Department of Education should create and disseminate to every Ohio middle school and high school a tool kit for educating teachers, guidance counselors, advisors, OCAN staff, parents, and students about OCIS and the broad range of career-development programs and resources currently available in Ohio schools and about how to use these resources to help students understand the education and training requirements for various careers.

The Commission encourages the Governor to request the Ohio Board of Regents and the State Board of Education to identify strategies for ensuring that all components of Ohio’s P-16 educational system support the objectives of the marketing campaign – and, more broadly, work together to raise students’ and parents’ awareness of and aspirations for advanced learning opportunities.

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### Goal 1 Sample Metrics

**General**
- Annual rate of progress toward reaching the state goal of increased participation in postsecondary education
- Annual benchmarking of Ohio’s ranking of percent of population aged 18-34 participating in postsecondary education

**Participation**
- % of high school graduates who enroll in postsecondary education
- % of working-age adults enrolled part-time in postsecondary education, including adult workforce education
- % of college-age population enrolled in college, by ethnic groups
- Postsecondary enrollment per 10,000 population per county

**Success**
- % of first-time, full-time students completing baccalaureate degree in six years
- Certificates, degrees, and diplomas awarded per 100 undergraduates
- % of community and technology college students completing associate degree in four years
- Ethnicity distribution of degree completers compared to ethnicity distribution of high-school graduates
- % of adults with baccalaureate degree or higher
- Associate, undergraduate, and graduate degrees conferred per 100,000 population
- Graduates’ survey ratings of satisfaction with learning
- Employers’ survey ratings of satisfaction with graduates
- Score and pass rates on selected tests and licensing exams
- Employment rate of graduates
- Starting salaries of graduates

**Areas of demonstrated need**
(e.g., science, technology, engineering, mathematics, and healthcare)
- Number of degrees and % change in degrees in science, technology, engineering, mathematics
- Number of degrees and % change in mathematics and science teachers
- Number of degrees and % change in degrees in nursing

**Reduced financial barriers to higher education**
- Proportion of students applying for financial aid who actually receive aid
- Four-year tuition as a percent of family income
- Two-year tuition as a percent of family income

**Reduced barriers to articulation and transfer**
- % of students beginning in community colleges and technical colleges who complete baccalaureate degrees
- % of community and technical college students who transfer to baccalaureate-granting institutions
- % of college courses that transfer among institutions

**Return on investment**
- Cost per full-time equivalent student
- Cost per achievement unit (e.g., cost per successful placement in the workforce; cost per degree conferred)
- Measures of individual and collective benefits of degrees conferred
**Improving academic preparation**

To ensure that all Ohio high-school graduates are prepared for the intellectual demands of college and adult life, the Commission urges the state to continue implementation of Ohio’s P-12 standards-based reforms using the blueprints provided by the Governor’s Commission for Student Success (2000) and the Governor’s Commission on Teaching Success (2003). Specifically, the Commission embraces the development, implementation, and ongoing assessment of and accountability for rigorous academic content standards for all students and statewide teaching and professional development standards for all teachers.

The Commission urges the Governor to issue an Executive Order recognizing the Joint Council of the Ohio Board of Regents and State Board of Education as the statewide P-16 advisory body with responsibility for promoting an integrated system of education that begins in early childhood and continues beyond college, renaming the Joint Council the “Ohio P-16 Education Council,” and reconstituting the Council’s membership. The work of the P-16 Education Council should not affect any of the current statutory authority of the State Board of Education or the Ohio Board of Regents. The Governor should call for the P-16 Education Council to meet at least quarterly.

The Commission also recommends that the P-16 Education Council’s membership should be broadened from the current membership of the Joint Council, which is the Superintendent of Public Instruction, the Chancellor of the Ohio Board of Regents, and three members from both the Board of Regents and the State Board of Education.

The members of the reconstituted P-16 Education Council should be the Superintendent of Public Instruction, the Chancellor of the Ohio Board of Regents, two Regents and two members from the State Board of Education, the Governor’s Executive Assistant for Education, the Governor’s Advisor for Higher Education and the Economy (a post proposed by this Commission), the Chair of the Ohio Business Alliance for Higher Education & the Economy (or designee), two members of the Ohio General Assembly, and four members appointed by the Governor – the provost of an Ohio four-year college or university, the chief academic officer of a two-year college, a superintendent of a P-12 school district, and a representative of a regional P-16 council.

The Ohio Board of Regents should be given the authority and resources to define by 2007, in consultation with representatives of Ohio’s colleges and universities, what students should know and be able to do to be successful in college **without remediation**. This work, which already has been initiated by the Board of Regents’ Articulation and Transfer Advisory Council, should yield a common statewide definition for remediation and clear standards for when remediation is required. The Board of Regents should use the P-16 Education Council to include the P-12 perspective in this work and to ensure that the remediation-free standards are aligned with Ohio’s P-12 academic content standards and high-school graduation requirements.

When the remediation-free standards are completed, the P-16 Education Council should ensure that the information is communicated to all Ohio colleges and universities to inform their placement and remediation practices and to all P-12 school districts to ensure that they provide instruction and intervention that will prepare high-school students to enter college **without a need for remediation**. In addition, the Board of Regents should use the new standards as the basis for its annual, statutorily required (ORC 3333.041) report on the percentage of high-school graduates who require remedial education when they move on to postsecondary education.
To ensure that state-level policies on P-16 integration are enacted at the local level, the Governor should charge the P-16 Education Council with encouraging the creation of new regional P-16 councils or supporting existing regional P-16 councils such as the P-16 Compact for Stark County. The P-16 Education Council should facilitate the activities of the regional P-16 councils rather than direct and control them.

The Governor should charge the P-16 Education Council with conducting a comprehensive study of Ohio’s existing opportunities for students to earn college credits while still in high school, and with developing specific recommendations for removing the financial, cultural, and organizational barriers that prevent institutions from providing more Ohio students with the opportunity to participate in these programs. As part of this study, the P-16 Education Council should establish specific participation-rate goals for Postsecondary Enrollment Options (PSEO) and other early-college programs.

When the study is complete, the P-16 Education Council should disseminate best practices gleaned from current partnerships between high schools and institutions of higher education (e.g., the Ohio High School Transformation Initiative and Early College) that create opportunities for high-school students to earn up to two years of college credits or an Associate Degree before graduating from high school.

The Ohio Board of Regents should ensure that all opportunities for high-school students to earn college credit before graduation meet college-level standards and are included in the electronic Course Applicability System (CAS), which provides information needed for course transfers.

Finally, the Governor should charge the P-16 Education Council with reporting annually on the progress of the P-16 integration of Ohio’s elementary, secondary, and postsecondary education systems by disseminating both state-level and district-level results on performance measures such as (a) the percentage of graduates enrolled in postsecondary education and (b) the percentage of graduates who complete high school having attained some college-level skills and knowledge (e.g., those earning advanced-placement credits or successfully completing college-level courses prior to high-school graduation).

**Reducing the financial barriers to higher education**

The Commission recognizes that financial barriers to higher education must be lowered if Ohio is to achieve the ambitious postsecondary education-participation goals it has proposed. Despite well-intentioned efforts of the leaders of Ohio’s colleges and universities and state legislators, tuition continues to rise and is a growing concern for many Ohioans. The Commission also believes that meaningful discussions of tuition restraint can be achieved only by simultaneously discussing other factors affecting the cost of postsecondary education such as productivity, efficiency, and state support.

The Commission’s call for a “compact” in Recommendation 9 is designed to restrain college and university tuition increases by securing the resources needed for increased participation in higher education through a combination of increased productivity and cost-cutting by colleges and universities and increased support for higher education by the State of Ohio. To further check rising tuition, the Commission also recommends that greater flexibility be granted in two areas:

While the Commission does not regard tuition caps as the ultimate solution to tuition restraint, it believes that as long as the Ohio General Assembly leaves caps in place, exemptions should be granted to a limited number of
colleges and universities that agree to implement, on a voluntary basis, some type of “tuition certainty” pilot project in which tuition levels, or rates of tuition increase, are held constant for students throughout their four- or five-year undergraduate careers.

The General Assembly should eliminate any ambiguity in statutory language that limits public colleges’ and universities’ flexibility in establishing different tuition policies for courses offered at different times of the day or year or for academic programs in high-need, priority subject areas.

Consistent with its statutory authority to make recommendations to the Governor and Ohio General Assembly about the design and funding of financial aid programs (ORC 3333.04), the Ohio Board of Regents, in collaboration with college and university financial aid officers, should develop a plan for consolidating and simplifying federal, state, and institutional (both public and private) financial aid policies and practices. The Board of Regents’ purpose should be to ensure that these policies and practices (a) are easy to understand and access for all Ohioans, and (b) contribute to the goal of increasing the number of Ohio citizens who participate and succeed in higher education.

The Commission also recommends that consideration be given to adopting the Ohio College Opportunities Grants proposal developed by the Association of Independent Colleges and Universities of Ohio (AICUO) as an alternative to the existing Ohio Instructional Grants (OIG) program. The AICUO proposal calls for the OIG to be renamed Ohio College Opportunities Grants and for the “Estimated Family Contribution,” which is used on federal financial aid forms, to be used in determining eligibility. Any change in the OIG program should be guided by principles that will help achieve the increased higher education participation goal of the Commission.

A guiding principle for designing the integrated financial aid policy should be a commitment that the integration will not result in a net shifting of state financial aid resources from students with demonstrated financial need to students with no financial need. The plan should be reported to the Governor and the Ohio General Assembly by January 2005. In addition, reports monitoring the proportion of university funding going to financial aid and the proportion of both state and university funding dedicated to financial aid based on need versus financial aid not based on need should be delivered to the Governor and General Assembly biennially.

Finally, the Ohio General Assembly should consider providing new or reallocated funding for scholarship programs such as the Ohio Board of Regents’ proposed “Learn-and-Earn” program that are designed to raise elementary and secondary students’ awareness of and academic preparation for college while providing them with opportunities to earn credits for college tuition through academic achievement. If funds are reallocated to support such scholarship programs, those funds should not be shifted from the OIG program, which the Commission believes is an effective program serving a useful purpose that should not be compromised.

**RECOMMENDATION: Increase the number and proportion of Ohioans with mathematics and science knowledge, skills, and degrees.**

In view of the importance of building a strong foundation of mathematics and science skills from pre-kindergarten through college, the Commission urges the Ohio General Assembly to charge the Ohio Board of Regents and the State Board of Education, through the Ohio P-16 Education Council, with developing a strategic plan for increasing the number of Ohioans with mathematics and science knowledge, skills, and degrees. The plan should include the following components:
• Strategies for coordinating and expanding the successful mathematics and science education initiatives – including partnerships between higher education and P-12 school districts – being implemented at the local level.

• Strategies for identifying federal and private funding to improve academic achievement in mathematics and science education. When federal and private grants focused on improving mathematics and science achievement require matching funds, the Ohio General Assembly should make the appropriate allocations.

• Mechanisms for documenting the supply, demand, and skill level of Ohio’s mathematics and science teachers. Based on the investigation, the P-16 Education Council should make recommendations to the Ohio Board of Regents and the State Board of Education on strategies for ensuring an ample supply of qualified teachers in mathematics and science for Ohio schools.

Achieving the goal of increasing the number and proportion of Ohioans with strong mathematics and science knowledge and skills will require an increased emphasis on mathematics and science throughout Ohio’s P-16 education system. Specifically, the Commission urges the Ohio General Assembly to require all students, as a condition for high-school graduation, to take at least four units of mathematics aligned with the state’s academic content standards or to demonstrate a mastery of Ohio’s 12th grade academic content standards for mathematics through some form of performance assessment documentation. Commission members believe that there may be different pathways to skill and knowledge acquisition and that Ohio ultimately should transition to a focus on documented skills and knowledge rather than required courses.

The Ohio P-16 Education Council should review high-school science requirements and, if appropriate, make recommendations to the State Board of Education to increase the high-school graduation requirements for science knowledge and skills.

The Ohio P-16 Education Council also should review the mathematics and science requirements for students entering public colleges and universities and, if appropriate, make recommendations to Ohio’s colleges and universities to increase the mathematics and science competency levels required for placement in college-level courses. Any recommendations should take into account (a) nontraditional students who did not have the opportunity to meet increased high-school mathematics and science requirements, (b) the role of community colleges and university branch campuses, and (c) the role of those four-year universities that serve as community-access institutions.

The Commission believes that if the Ohio General Assembly continues the practice of permitting additional tuition increases (i.e., above legislatively established caps) as long as the increased revenues are used for specific purposes (e.g., technology), some limited increases should be permitted for institutions that will dedicate the funding to increasing production of science, technology, engineering, or mathematics graduates. This policy should be constructed to recruit both in-state and out-of-state students to these fields.

The Commission urges the Ohio Workforce Policy Board, in collaboration with the Ohio Board of Regents, to evaluate the effectiveness of the Third Frontier Internships for increasing the number of science, technology, engineering, and mathematics graduates and, if the evaluation warrants, funding for the internships should be continued through a permanent allocation by the Ohio General Assembly.

...increasing Ohioans' participation and success in postsecondary education will improve the state's economic vitality and competitiveness.
Finally, the Commission urges the Higher Education Funding Commission to recommend changes to modify the state’s funding system to include incentives for Ohio’s colleges and universities to produce science, technology, engineering, and mathematics graduates.

RECOMMENDATION: Create a more user-friendly network of postsecondary institutions that will make it easier for students to apply to and transfer among Ohio’s colleges and universities.

The Commission voices strong support for the Ohio General Assembly’s and the Ohio Board of Regents’ determination to remove unnecessary barriers to the transfer of coursework between state institutions of higher education by fully implementing new transfer and articulation policies and systems – including the Course Applicability System (CAS), which provides students and campuses with information about course transferability – by April 2005. Legislative leaders have expressed the view that nothing should be permitted to stand in the way of this legislated initiative, which will make the postsecondary education experience more student-centered.

To ensure that the recent enactment of ORC 3333.16 will remove unnecessary barriers to the transfer of coursework between state institutions of higher education, the Commission urges the Ohio General Assembly to provide the funding required to implement the CAS fully.

In addition, state legislators should build on the foundation provided by ORC 3333.16 by establishing long-term goals for the Ohio Board of Regents to improve the network continuously by making the postsecondary educational experience more student-centered and eliminating barriers for students pursuing higher education. Specifically, the Commission recommends that the Ohio Board of Regents be charged with the following responsibilities:

- Coordinate a collaborative, institution-driven process to create a single, common electronic application form that would be accepted by all public colleges and universities in Ohio and that would allow students to apply to multiple institutions simultaneously. Individual institutions should be permitted to require a supplement to the statewide “common application” to allow for institution-specific items such as essay questions.

- Encourage partnerships that will increase the number of four-year degree programs at two-year campuses through collaborations with baccalaureate-granting institutions.

- Continue the current statewide effort to develop “Transfer Assurance Guides” that clarify which educational programs provide pathways from two-year to four-year degrees.

The Commission also believes that the Ohio Board of Regents and the State Board of Education, working through the Ohio P-16 Education Council and in collaboration with the Ohio Board of Regents’ Articulation and Transfer Council, should be charged to facilitate articulation agreements between and among adult workforce education full-service centers and colleges and universities.

Consistent with the current national emphasis on assessing educational outcomes by knowledge and skills obtained rather than credits earned, the Commission urges the Board of Regents to coordinate an institution-driven process, with input from employers where appropriate, for transitioning to a higher education system that grants credentials and degrees on the basis of demonstrated skills and knowledge rather than on number of courses completed. This dramatic shift admittedly will be a long-term process, and a range of assessment tools will be necessary to measure outcomes for
the different types of education offered at public and private institutions, but the process should be started. The ultimate goal should be an educational system that acknowledges and certifies knowledge and skill regardless of how or where they are obtained.

RECOMMENDATION: Require Ohio’s two-year public colleges and university branch campuses, adult workforce education full-service centers, local workforce policy boards, and One-Stop Regional Workforce Advisory Councils to work as partners in improving the skills of Ohioans already in the workforce.

The Commission urges the Ohio Workforce Policy Board to charge its Worker Quality Committee – comprising representatives from business, the Ohio Board of Regents, the Ohio Department of Development, the Ohio Department of Job and Family Services, and the Ohio Department of Education – to recommend policies for aligning the state’s diverse and fragmented array of workforce development resources and funding streams. The outcome would provide an environment more conducive to comprehensive planning and strategic decisions.

In the Commission’s view, the Committee should recommend policies that require two-year colleges and adult workforce education full-service centers to work collaboratively with each other, local workforce policy boards, local One-Stop Regional Workforce Advisory Councils, and regional offices of the Department of Development to provide easy access for employers seeking training for their employees and for individuals seeking to upgrade their knowledge and skills. In regions of the state where it is appropriate, the Committee should encourage the participation of proprietary and private colleges and universities in these partnerships.

The partnership model should ensure that there are no “wrong doors” for individuals or employers seeking continuous learning for themselves or their employees. If an organization does not offer a particular learning opportunity, it should be able to provide a referral to a partner who does. For this purpose, the Committee should establish criteria for approval of service-delivery partnerships as well as procedures for allocation of funding to approved partnerships.

The Ohio Workforce Policy Board, drawing on the resources of the Board of Regents, Department of Development, Department of Job and Family Services, and Department of Education, should support the regional service-delivery partnerships with resources such as a state-level clearinghouse of best practices and data-analysis assistance. In addition, the Workforce Policy Board should lead a collaborative process that includes the Board of Regents, the Department of Education, and initiatives such as the Ohio Learning Alliance and the Ohio Learning Network to create a system that offers low-cost, entry-level, technology-based, self-paced courses in reading, writing, mathematics, and fundamentals of information technology for incumbent workers, particularly older workers and those who have been laid off or dislocated by changing industry needs.

Finally, the Ohio Department of Development should work with the various providers in Ohio’s network of service-delivery partnerships to promote an “Ohio Workforce Guarantee” that guarantees full access to a highly skilled, adaptable, and learning-ready workforce for businesses and entrepreneurs thinking about locating or expanding in Ohio.
Investing in people is one of the core strategies that shapes the Commission's policy recommendations. Another is investing in research and innovation.

Why? Because success in the knowledge- and innovation-based economy will require more than just highly educated, highly skilled workers – it also will require high-wage, high-growth jobs for those workers. The Commission believes the best way to create those jobs is to build the capacity of Ohio's colleges and universities to generate scientific breakthroughs and technological innovations, through basic and applied research, that not only will create new business enterprises and sectors but also will help continue the transformation of Ohio's core agricultural and manufacturing sectors.
In recognition of this dynamic, the second major goal the Commission’s policy recommendations are designed to achieve is to **create more jobs and economic growth by strengthening higher education’s research base and ability to develop and bring to market new ideas and innovations.**

The need is both urgent and real. While media reports frequently suggest that Ohio is suffering from a “brain drain” – i.e., an exodus of our best and brightest college graduates – a careful examination of the data reveals a different story. Data presented to the Commission by the Center for Human Resource Research at The Ohio State University revealed that Ohio’s young college graduates are no more likely to migrate to other states than are young college graduates in other states. Instead, the data suggest that the real problem facing Ohio is “weak attraction.” In other words, Ohio is not offering enough job opportunities to attract its proportionate share of young college graduates from other states. (See the adjacent box for a more detailed explanation of Ohio’s migration data.)

The Commission believes that expanding Ohio’s university-based research will create the jobs and the economic activity that attract world-class talent. Research and development (R&D) investments promote job creation both directly, through the R&D jobs themselves, and indirectly, through the expansion of existing companies and the creation of new companies that result from the commercialization of the innovative products, processes, and services developed through the R&D.

This is a comparatively new role for higher education to play. In FY 2001, Ohio’s doctorate-granting institutions had $558,751,000 in federally financed R&D expenditures, which ranked Ohio 10th in the nation that year. From FY 1998 through FY 2001, business-financed R&D at Ohio’s research universities totaled

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**Brain Drain or Weak Attraction?**

Migration of workers between states is common in the United States. Between 1995 and 2000, about 1 in 11 Americans aged 20 and above – nearly 18 million people – moved between states. When considering a state’s economic climate, it is important to look at both the flow of people out of the state and the flow of people into the state.

An analysis of 2000 U.S. Census data prepared by the Center for Human Resource Research at The Ohio State University reveals that Ohio had a net loss of about 25,000 young college graduates between 1995 and 2000. The data show, however, that the root problem was not the migration of college graduate away from Ohio; in fact, the data reveal that Ohio’s young college graduates are no more likely to migrate out of state than are young college graduates in other states across the country.

Rather, the real problem is Ohio’s failure to attract a proportionate share of young college graduates from other states to replace those who left Ohio as part of the normal migration of educated young people in our society. Between 1995 and 2000, 1.9 million young college graduates in the United States migrated among states. Ohio contributed 3.6 percent of the pool but gained only 2.6 percent of those who migrated among states.

These data indicate that rather than “brain drain,” a more accurate label for Ohio’s problem would be “weak attraction.”

Job opportunity is the most important reason young graduates migrate, and Ohio’s economy simply is not offering enough job opportunities to attract its share of young graduates from other states. The negative impact of this dynamic on the state’s economy is further compounded by the fact that Ohio’s young people with no college education are less likely to leave the state than similarly undereducated young people across the United States. Because many of these individuals lack the skills that are needed in today’s knowledge- and innovation-based economy, they struggle with achieving economic self-sufficiency. Helping these individuals secure better lives for themselves will secure a better economic future for Ohio. Creating better lives for citizens and a healthier economy for the state will require that more Ohioans – many more Ohioans – participate and succeed in postsecondary education and in continuous, lifelong learning.
$341,523,000. In FY 2001 alone, Ohio universities attracted nearly $86 million in industrial R&D support, which placed Ohio 9th in the nation for volume of industrial support for university research. These national rankings are promising, but Ohio is the 7th most populous state in the nation; so, measures based on quantity alone, which favor large states, are not adequate indicators of Ohio’s research strength relative to other states.

In recent years Ohio’s colleges and universities have been increasingly active in transferring the innovations resulting from their research into commercial applications for business and industry. According to the Association of University Technology Managers, during the six most recent fiscal years for which data are available (FY 1997 to FY 2002), Ohio universities received 2,040 invention disclosures from faculty, staff and graduate students; filed 1,095 patent applications based on those individuals’ research; executed 373 license and option agreements with business and industry; secured 569 U.S. patents; and formed 59 new start-up companies.

These results are good – but they are not good enough. As the migration data cited previously demonstrate, Ohio simply is not attracting enough college graduates from other states. The Commission believes increasing research capacity and performance in the state’s colleges and universities in targeted areas of economic strength and opportunity will attract more talent to Ohio and lead to discoveries and innovations that, when commercialized, will in turn lead to the formation of new businesses and create new jobs. It also believes Ohio must take greater advantage of campus-based programs and services that facilitate entrepreneurial activities.

Therefore, the Commission proposes a major refocusing and expansion of state investment in university-based research through programs designed to attract more preeminent researchers to the state and to build world-class research and technology-transfer and commercialization capacity in Ohio.

Fortunately, Ohio already has a road map for accomplishing this objective. The Third Frontier Project – a collaboration among the state, business and industry, public and private institutions of higher education, and private research organizations – is seeding future economic growth in Ohio by expanding Ohio’s high-technology research capabilities and increasing the state’s ability to compete in important technology sectors of the economy. The Commission’s recommendations for leveraging the assets of Ohio’s colleges and universities to strengthen the state’s ability to create, disseminate, and commercialize new knowledge are intended to complement the Third Frontier investment strategies already underway in Ohio.

The Commission believes there must be no delay in reclaiming Ohio’s heritage as a leader in innovation and discovery. A renewed emphasis on basic and applied research and technology transfer and commercialization, together with support for knowledge-based and entrepreneurial activities, is the core of the Commission’s strategy for accelerating that effort.

RECOMMENDATION: Attract and retain more preeminent researchers to maximize the world-class research, innovation, and technology-commercialization capacities of Ohio’s public and private institutions of higher education to drive economic growth and create jobs.

Successful innovation – the continuous process of generating and applying new ideas to the creation and upgrading of products, processes, and services – is a significant ingredient of long-term economic growth. It relies on highly skilled workers who can invent new products
and processes, staff essential production systems, maintain complex equipment, and use new technologies in their own organizations. It demands strategic investments that support discovery and move basic and applied research to the marketplace. And it depends upon people who understand what it takes to turn great research into innovative products and what they can do to make it happen.

This is a complex and uncertain process. The Commission believes that Ohio – to be economically competitive with the most successful states – must increase both the quantity and competitiveness of research conducted at its public and private institutions of higher education. To achieve this goal, the Commission is recommending actions designed to increase the state’s share of federal and industrial research funding to 10 percent above the national per capita average by 2015. Currently, Ohio’s share is 21 percent below the national per capita average.

Ohio’s progress toward increasing the quantity and improving the competitiveness of university-based research should be monitored annually by the Business Alliance for Higher Education & the Economy. The specific metrics used to track progress should be developed through a collaborative process involving the Business Alliance, the Ohio General Assembly, the Governor, the Ohio Department of Development, and the Ohio Board of Regents, in consultation with the state’s colleges and universities. Sample metrics that can be used as a starting place for discussion are provided in the adjacent box.

For this purpose, the Commission encourages the Governor and state legislators to charge the Third Frontier Commission with developing an integrated statewide research and development strategy and budget that (a) builds on existing competitive research strengths with the greatest potential for world-class stature and results and (b) encourages new and emerging discoveries. It also calls for better coordination of strategic planning, budgeting, and program implementation for Third Frontier programs with other existing programs intended to build Ohio’s world-class stature in research and development.2

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1 Third Frontier programs include Biomedical Research and Technology Transfer Trust Fund, Wright Capital Fund, Third Frontier Action Fund, Innovation Ohio Fund, and any other appropriations provided to support Third Frontier Project activities.

2 Other programs include Research Challenge (proposed to be renamed Research Incentive), Hayes Investment Fund, Action Fund, Eminent Scholars, Computer Science Graduate Education, Ohio Academic Resources, Ohio Agricultural Research & Development Center, Ohio Aerospace Institute, Ohio Supercomputer Center, Thomas Edison Program, and Goal Research & Development.
The Commission calls for the continued funding, at the full level of support, for all components of the Third Frontier Project, a strategic investment initiative designed to build jobs and economic growth through a variety of initiatives including expansion of Ohio’s world-class, college- and university-based research capabilities and commercialization of ideas and innovations through competitive, independent evaluations of economic potential.

To achieve Ohio’s goal of significant increases in federal and industrial research funding, the Commission also urges the Ohio Board of Regents, with authorization from the Ohio General Assembly as required, to create an Economic Growth Challenge composed of the following three programs:

1. The existing Research Challenge should be renamed the Research Incentive, and funding for this incentive should be increased to assist Ohio’s public and private colleges and universities to perform competitive, world-class research in mathematics, engineering, and the various sciences. The Ohio Board of Regents should assure that the state’s private colleges and universities move toward participating in the Research Incentive program to the extent permitted by law.

2. A new Innovation Incentive should be established and funded through institutional reallocation and matching state funds. The reallocation should, over a six-year period, transfer 15 percent (i.e., 2.5 percent per year) of each public institution’s state funding for doctoral programs to support those areas of research that have the greatest potential to (a) attract preeminent researchers and build world-class research capacity; (b) create new products and services to be commercialized, leading to job creation and economic growth in Ohio and in the regions of the state; and (c) complement funding provided from programs included in Ohio’s Third Frontier Project. An external evaluation should be conducted to document each institution’s reallocations, which would be carried out under the following terms:

• The reallocated funds would be matched by an equal amount of new state funding, to be phased in on the same schedule as the institutions’ doctoral funding reallocations. The new state dollars would fund Innovation Incentive grants that would be awarded on a competitive basis.

• After a transition period of no longer than two years, the Board of Regents could begin withdrawing a portion of an institution’s doctoral funding if it does not achieve the reallocations called for in the Innovation Incentive and if it does not compete successfully for Innovation

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1 For an example of how the proposed Innovation Incentive could be implemented, see the documents The Innovation Incentive, which was developed by the Inter-University Council of Ohio and the Ohio Board of Regents, and Academic Program Review, which was developed by the staff of the Board of Regents, on the Ohio Board of Regents’ Web site at http://www.regents.state.oh.us/.
Incentive awards. The potential amount of the withdrawal could increase by annual increments of as much as 2.5 percent and would be capped at 15 percent over the six-year phase-in of the Innovation Incentive.

• The Board of Regents should assure that Ohio’s private colleges and universities are eligible to participate in the Innovation Incentive program if they commit institutional resources to the program equivalent to those required of public institutions.

3. A new competitive Technology Commercialization Incentive should be established to reward colleges and universities for successful technology transfer resulting in commercialization of new ideas, to motivate colleges and universities to work more productively with businesses in identifying and commercializing technologies and to engage in more joint industry-university research ventures. The Third Frontier Commission, with counsel from the Third Frontier Advisory Board, should establish the eligibility criteria for public and private colleges and universities interested in applying for Technology Commercialization Incentive funding. To qualify, however, participating colleges and universities should be required to (a) invest in their own technology-transfer and commercialization operations and capabilities, and (b) follow policies that give preference to working with Ohio-based businesses.

Chief among the criteria for awarding grants from the three incentive funds should be a program’s demonstrated potential for attracting preeminent researchers and building world-class research and commercialization capacity.

To enhance the quality of research and graduate education at Ohio’s universities, the Commission believes the General Assembly should expand the Ohio Board of Regents’ authority for reviewing graduate and professional education programs to include the ability to remove an institution’s right to offer a degree program. The Board of Regents’ review of program need should incorporate an analysis of a program’s quality and value within the institution and a study of its economic impact on the community and/or region. The review should use a process similar to that employed in the statewide doctoral review of 1995-1996. A college or university that successfully complies with all of the requirements of the Innovation Incentive, including resource reallocation, external review of resource allocation, and success in securing an Innovation Incentive award, should be exempt from the Board of Regents’ expanded program review authority.

The success of the Economic Growth Challenge’s three independent, but related, programs depends on an agreement with three mutually enabling commitments:

• Ohio’s public and private colleges and universities agree to focus their research commitments, their doctoral programs, and their technology-transfer resources on strengthening Ohio’s economy.
• The Ohio General Assembly agrees to provide additional funding.
• The business community agrees to participate in guiding and supporting institutional efforts to strengthen the economy and to support the General Assembly as it makes necessarily difficult budget and policy decisions.

Finally, the Governor, with input from the Third Frontier Commission and the Ohio Business Alliance for Higher Education & the Economy, should coordinate Ohio’s Washington lobbying effort involving the state’s colleges and universities, private-sector companies, and state government to attract more federal research, development, and demonstration funds to Ohio.

RECOMMENDATION: Assist Ohio businesses and entrepreneurs with turning university-based research into technology-driven products, processes, and services that reach the marketplace and expand employment opportunities in Ohio.

The Third Frontier Commission, aided by the Third Frontier Advisory Board and other private- and public-sector technology transfer professionals, and with input from local technology-transfer organizations, should investigate the barriers that prevent or delay the commercialization of Ohio’s investment in university-based research. The investigation should (a) identify best practices for transferring technology and innovations into the marketplace, (b) shape recommendations for removing any inappropriate barriers, and (c) develop criteria for the Technology Commercialization Incentive fund described above.

The Commission believes that the Third Frontier Commission’s work should be shaped by a clear understanding of the needs of Ohio businesses and entrepreneurs and should use that understanding to develop and leverage appropriate research connections.
Achieving the goals proposed by this Commission will not be easy. Nor will it be inexpensive. The challenge is twofold: (a) where to find additional resources – and new efficiencies – in a time of extreme budget restraints, and (b) how to ensure improved performance and greater return on the public’s already substantial investment in higher education. The answer to both questions is largely a matter of accountability.

With regard to resources, the Ohio Board of Regents’ 2003 Performance Report for Ohio’s Colleges and Universities reported that, in FY 2002, Ohio ranked 44th in state appropriations per student and 30th in overall revenue (i.e., appropriations and net tuition) per student. According to data compiled by the Center for the Study of Education Policy, in FY 2002 Ohio, which is the 7th most populous state, ranked 8th in total appropriations for higher education operating expenses. Throughout its deliberations, the Commission discussed the resource needs of higher education and reviewed state
funding data (see pages 57-61). Many Commission members concluded that Ohio has historically underinvested in higher education and that continued low support for higher education could have negative implications for the state’s economic well being.

And yet, the answer is not simply to pour more public money into the state’s colleges and universities. Public resources are limited, and both political will and public support may be lacking. The Commission believes there are academic and administrative efficiencies that could be explored and implemented to improve productivity.

Indeed, the challenge of increasing learning productivity – i.e., increasing cost-effectiveness while sustaining or improving the quality of the educational outcomes – in Ohio’s colleges and universities is a formidable one. But it is a challenge that must be embraced with enthusiasm and commitment. The Commission urges the state’s higher education community to expand and intensify both institutional and collaborative efforts to identify and implement strategies for improving efficiency and productivity where applicable and for creating new innovations in teaching and learning where needed. If Ohio is to be known as a state that successfully uses innovation to fuel economic growth, then innovation in its institutions of higher learning – and measurable gains in operational efficiencies and learning productivity – must be part of the state’s strategy for achieving the Commission’s ambitious goals for increasing the number of Ohioans with postsecondary education opportunities and advanced knowledge and skills.

Nonetheless, the Commission believes that to secure a position as a national leader in higher education and in today’s technology-based knowledge economy, Ohio must be competitive in its support of the state’s colleges and universities. The Commission recommends, therefore, that the state should, over time, increase its investment in its colleges and universities. The purpose of any new investments should be strategic – i.e., targeted to achieve demonstrated gains in learning and research productivity, not simply to match per capita funding levels consistent with the top-spending states – and should support efforts to harness higher education’s potential as an engine for economic growth and enhanced competitiveness.

Just as important, funding increases should be contingent on key stakeholders’ success in improving the system’s productivity and efficiency. This contingency is at the heart of the Commission’s recommendations for strengthening accountability for achieving the goals of increased participation in postsecondary education, greater productivity and value for the state’s investment in higher education, and greater success in creating and bringing to market new ideas and innovation that spur economic growth and strengthen economic competitiveness. The Commission strongly believes in shared accountability for results. For this reason, the cornerstone of the Commission’s accountability recommendations is a “compact” among higher education, the business community, and state government to strengthen accountability for achieving the goals articulated in the Commission’s report.

In the words of the Commission’s principal consultant, Dr. Stephen Portch,

“It’s time for a new compact among the state, the university, and the business community. It’s time to invest in the link between certain university research and the new economy and in the undergraduate education of a higher proportion of the state’s population. These are mutually reinforcing activities. If there is no compact, then no new relationship can be realized.”
The Commission believes such a compact is possible in Ohio – and that it must be built upon unwavering commitments from all stakeholders to address in a united and mutually accountable fashion such core issues as funding for higher education, academic and administrative efficiency and productivity, and the access and affordability of postsecondary education for a greater number of Ohioans. Only with such commitments will Ohio be able to tap the full potential of the state’s colleges and universities as an engine for driving economic growth and strengthening economic competitiveness.

The Board of Regents’ annual Performance Report for Ohio’s Colleges and Universities is a useful tool for providing a data-driven measure of accountability for the state’s institutions of higher education. The data reported in this report are particularly useful in helping to establish benchmarks to help colleges and universities identify their strengths and weaknesses and to design and monitor the progress of institutional strategies for continuous improvement. The Commission believes, however, there is a need to develop new and more sophisticated metrics for evaluating the performance of Ohio’s colleges and universities – metrics that focus more clearly on productivity, efficiency, and teaching and learning outcomes.

That is why a key feature of the accountability framework proposed by this Commission is a biennial “Results Through Productivity” report that will provide a credible public record of progress toward (a) achieving both statewide and institutional goals for higher education as an engine of economic growth, (b) improving the state’s return on investment in higher education due to documented productivity and efficiency improvements, and (c) restraining tuition increases to support the efforts to broaden college participation. Together with proposed pilot projects to increase academic and administrative efficiency and productivity, the new performance reporting mechanism should both build public support for additional investments in higher education and spur improved performance.

Finally, accountability for results begins at the top. For that reason, the Commission also has recommended changes to strengthen the Governor’s leadership role and to support the work of college and university trustees.

**RECOMMENDATION: Enhance the Governor’s higher education leadership role and support the work of public college and university trustees in ways that will advance higher education’s role in economic development.**

Despite the pace of change in the emerging knowledge- and innovation-based economy – or possibly because of it – the ability of leaders to project a compelling vision for their organizations, identify the strategies and resources needed to achieve it, and create a culture of execution that makes that vision a reality has never been more critical. This is true in virtually every business, large and small. It is the case in 21st century colleges and universities. And it certainly applies to the State of Ohio.

This explains the Commission’s support for several actions designed to enhance the Governor’s higher education leadership role.
and to strengthen the ability of college and university trustees to lead their institutions in ways that enhance the state’s economic growth and competitiveness.

As a first step, the Commission believes that the Governor should appoint an Advisor for Higher Education & the Economy who would be charged with informing and advocating for state-level public policy that advances higher education’s role in driving economic growth.

To enhance further the higher education leadership role of future Governors, the Ohio General Assembly should modify existing legislation on the appointment of the Ohio Board of Regents to ensure that a Governor appoints Regents on a schedule of one per year, which is consistent with the schedule used for appointments of university trustees. Beginning in 2007, the Governor should appoint, on an annual basis, the Chair of the Board of Regents after consulting individually with the members of the Board. The Chair should be appointed from among those members who have at least three years of service on the Board, and Chairs should be eligible for reappointment.

Consistent with its current statutory responsibility to provide orientation for new public college and university trustees, the Commission urges the Ohio Board of Regents to brief all trustees on the role of higher education in fueling economic growth, increasing economic competitiveness, and creating more jobs for Ohio citizens. The Regents should conduct this orientation in collaboration with the Ohio Department of Development, the Governor’s Advisor for Higher Education & the Economy, and the Ohio Department of Education, and in partnership with the professional associations representing the leadership of Ohio’s two-year and four-year institutions of higher education.

To ensure the ongoing education of trustees about state-level goals and priorities for higher education, the Governor (or, at his or her request, the Governor’s Advisor for Higher Education & the Economy) should convene a meeting, no less frequently than once a year, of the chair of the Ohio Board of Regents and the chairs of the boards of trustees of Ohio’s public colleges and universities and selected private colleges and universities. The purpose of this meeting would be to discuss higher education policy, state-level priorities, and progress toward meeting the goals of increased participation in higher education, continuous learning for Ohio citizens, and increased research and development in higher education. The meeting should be planned and conducted in collaboration with the Business Alliance for Higher Education & the Economy and the Ohio Board of Regents. Participating trustees would be expected and encouraged to share the information from this meeting with their fellow trustees.

**RECOMMENDATION: Forge a compact among higher education, the business community, and state government to strengthen accountability for increasing college participation and expanding research and commercialization.**

Achieving the goals advanced by this Commission, which will produce significant returns on Ohio’s investment in higher education, will require a bold new compact among the Governor and the Ohio General Assembly, the state’s higher education institutions, and the business community (through the proposed Business Alliance for Higher Education & the Economy). Key principles of the compact should include the following:

- An acknowledgement that the compact is an interdependent agreement, with each partner’s ability and willingness to fulfill its commitment being contingent upon the other partners’ ability and willingness to do the same.
• A commitment from the colleges and universities to restrain tuition increases and to increase academic and administrative productivity while reducing real costs (i.e., adjusted for inflation) on a system-wide basis by a percentage to be determined per full-time equivalent (FTE) student per year.

• A commitment from the Ohio General Assembly to raise the basic higher education subsidy and financial aid support by a percentage per FTE to be determined for each year that the colleges and universities achieve their cost-reduction target.

• A commitment from the business community to provide leadership for the compact, keeping all stakeholders focused on the goals of increased participation and research commercialization, and to communicate with the education community about the knowledge and skills graduates need to succeed in the knowledge- and innovation-based economy.

While the specific terms of these agreements and commitments will have to be developed – and reestablished every two years – by the partners in the compact, and while the negotiated agreement will determine exactly how the compact will work, the following example illustrates how the compact might work assuming 2.5 percent annual enrollment growth system-wide and 3 percent inflation:

• The state’s colleges and universities would commit to reducing real costs (i.e., adjusted for inflation) on a system-wide by 2 percent per FTE per year.

• For each year that the colleges and universities achieve the 2 percent cost reduction, the Ohio General Assembly would commit to raise the basic higher education subsidy and financial aid by 3 percent per FTE.

• Any savings or additional revenues realized by colleges and universities could be used to avoid tuition increases. Alternatively, those dollars could be used for some combination of tuition restraint, tuition reduction through financial aid, or incremental investment in research.

In addition, the Commission believes that the Ohio General Assembly should charge the Ohio Board of Regents, with input from the Business Alliance for Higher Education & the Economy, with establishing a clear, publicly reported accountability framework for higher education. For the performance measures that deal with the adult workforce education system, the Board of Regents should collaborate with the Ohio Workforce Policy Board and the Ohio Department of Education. The framework should link the data provided in the Board of Regents’ Annual Performance Reports and in the Ohio Department of Education’s evaluation of adult workforce education full-service centers to specific performance indicators. The framework also should include performance indicators that will assess progress on the goals of increasing participation in higher education and strengthening higher education’s research base for creating and bringing to market new ideas and innovations.
The long-term goal of this effort should be to develop indicators that reflect performance quality, not merely reports of percentages and rates. Refining the indicators should be an ongoing process; therefore, the indicators should not be defined in legislation.

As part of each of the next five state budget cycles, the Ohio Board of Regents should submit to the Governor and the Ohio General Assembly a biennial “Results Through Productivity” report that provides both system-wide and institutional data summarizing (a) higher education’s progress toward meeting the state’s goals for higher education and the economy, (b) the optimization of the return on the state’s investment in higher education through productivity and efficiencies, and (c) achievements in restraint on tuition increases.

This report should be designed by the Ohio Board of Regents in consultation with the colleges and universities, the Governor, the General Assembly, and the Business Alliance for Higher Education & the Economy. The state’s institutions of higher education should be required to provide to the Board of Regents all of the necessary information requested by them, including the information outlined below. The Board of Regents should have access to the institutions’ backup support for such data and information.

The Commission recognizes the need for a concise report and offers the following suggestions for information that could be included:

• A chart indicating the dollar and percentage changes in spending-per-institution for the previous two years in instruction, institutional support (administration), academic support, student services, and all other costs. The chart should be accompanied by a brief narrative explaining the actual decisions made by the institutions to bring about the changes.

• A summary of each institution’s priority academic programs; any programs that are underproductive, inactive, or duplicative of programs of institutions in the same geographic area with an analysis of the costs associated with continuing those programs; and initiatives for program elimination in the previous two years, with the actual realized savings delineated.

• A summary of each institution’s significant cost savings over the previous two years with respect to administrative services and functions, indicating the source and amount of the cost savings.

• A summary of how the actual realized academic and administrative cost savings have been reallocated in the previous two years to increase participation in higher education, including accommodating the expected growth in student populations through a real decline in cost per full-time equivalent student; and, where appropriate, to increase research that can create and bring to market new ideas and innovations.
The Commission believes that in addition to serving as an essential accountability tool in their own right, these “Results Through Productivity” reports will be valuable reporting mechanisms for the success of the compact described previously.

As part of the state’s effort to strengthen its higher education accountability initiatives, the Commission urges the Ohio General Assembly to fund academic and administrative productivity and efficiency pilot projects recommended by the Ohio Board of Regents for an institution or group of institutions. Key factors in the selection of the pilot projects should be the ability of the institutions to provide matching funds as well as the potential transferability of the pilot-project concept to other institutions or groups of institutions. Specifically:

• **Academic pilot projects** could include instructional productivity strategies such as those developed by the Center for Academic Transformation (see pages 54-55) and/or Regional Academic Alliances of geographically proximate colleges and universities working together to actively share a high number of courses and degree programs at both the undergraduate and graduate levels. The Regional Academic Alliance concept has great potential for increasing educational quality while offsetting costs and could include all sectors of higher education. For example, collaborative doctoral programs in areas of critical state need could span public and private institutions. The Ohio Board of Regents could facilitate the creation of such Alliances, but participating institutions should be responsible for planning, operation, and management.

• **Administrative pilot projects** could include shared-service consolidations of “back-office” operations such as information technology; accounting; payables; legal; security; purchasing; payroll; course management; academic records; and some portions of human resources, admissions and financial aid. Funding for start-up implementation costs of selected shared-services pilot projects should be shared by the state and the participating institutions.

While the initial round of pilot projects is underway, the Ohio Board of Regents should conduct research to determine if other opportunities exist for groups of public and/or private colleges and universities in Ohio to partner with each other and/or with P-12 school districts or adult workforce education full-service centers in similar academic or shared-service alliances. In collaboration with the participating institutions, the Board of Regents also should conduct a thorough evaluation of the results of each pilot project to determine its effectiveness, costs, strengths, weaknesses, benefits, documented savings, and potential for expansion into additional areas of the state or other institutions, and should seek ways to scale up successful programs, including publicly sharing information about best practices.

The Commission calls for a legislative commitment that colleges and universities will retain the dollars they save through the elimination of underproductive and duplicative academic programs and administrative cost savings. Institutions also should be allowed to retain the...

...funding increases should be contingent on key stakeholders’ success in improving the system’s productivity and efficiency.
dollars saved through implementation of the pilot projects, provided that a portion of the cost savings is used to create a revolving fund to seed similar cost-saving measures at other institutions.

Since the compact will create a new environment for higher education funding discussions and decisions, the Ohio Board of Regent’s Higher Education Funding Commission (HEFC) should develop a plan for phasing out the “hold harmless” guarantee. The plan should include an analysis of both the positive and negative consequences of eliminating the guarantee including the likely impact on the goals of increasing participation and success and increasing commercialization of campus-based research. The HEFC also should examine other funding issues, in particular expanding funding for noncredit workforce-development courses, suggested in the “Policy Brief on a Funding Strategy for Ohio Higher Education” that was prepared for this Commission by MGT of America. (The policy brief is available in the Resources section of the Commission’s Web site at www.chee.ohio.gov.)

Finally, to assist campuses with achieving greater efficiencies, the Commission urges the Ohio General Assembly to consider eliminating the requirement that campuses use multiple prime contractors in their capital projects.
Higher education is a tremendous value for both individuals and society. People with a college education earn higher salaries, experience greater job satisfaction, and have more employment opportunities. The quality of their lives is better, and they are more likely to give back to their communities. With higher earnings, college-educated people contribute more to the state’s economic base through taxes. And with advanced education, they contribute more to the state’s prosperity by meeting the needs of the businesses that increasingly define Ohio’s knowledge- and innovation-based economy.

Early in its deliberations the Commission debated whether Ohio needs more educated citizens or more high-skill, high-wage jobs. As the Commission proceeded with its work, it became clear that Ohio must focus on both. It is unreasonable to expect that the state can increase its competitiveness in today’s economy simply by producing more highly educated, highly skilled workers. There must be a simultaneous effort to generate the scientific breakthroughs and technological innovations that will create the jobs for which these people are being prepared.
The Commission’s response to the Governor’s charge is an integrated set of policy recommendations that are designed to (a) provide more Ohioans with the knowledge and skills they need to succeed in the 21st century economy, (b) create more jobs and economic growth by strengthening higher education’s research base and ability to bring to market new ideas, and (c) strengthen higher education’s accountability for helping to create a better future for Ohio.

Now that the Commission has completed its work, there is a broad understanding that achieving higher education’s full potential to create more jobs and fuel economic growth is a big job. Commission members know that achieving higher education’s full potential to create more jobs and fuel economic growth will not be easy, nor will it be accomplished overnight. But there is widespread agreement that it can be done if Ohio citizens and their leaders have the courage, determination, and imagination to seize the opportunity to build on knowledge and invest in people.

Where should the work begin? Ultimately, this question must be answered by the Governor, members of the Ohio General Assembly, the Ohio Board of Regents and its staff, campus leaders at the state’s public and private colleges and universities, business leadership, and other stakeholders on whom the implementation of these recommendations will depend. But to help all of those stakeholders, the Commission has identified a number of priority actions for getting started.

**ENGAGING BUSINESS LEADERSHIP**

At the beginning of its work, the Commission heard these words from Dr. Stephen R. Portch, its principal consultant:

> “The current industrial models of public education, preschool through college, cannot adequately respond to the challenge of a knowledge economy. Either higher education can continue to muddle through or it can begin to reinvent itself in radically different ways. Yet, higher education cannot start down a difficult and treacherous path without a full partnership with both the state and its business leaders.”

Recognizing the wisdom of Dr. Portch’s counsel that there must be a three-way partnership to guide the state through the changes that are required, the Commission sought the involvement of Ohio’s business community, which led to the recognition that Ohio — as a state with many regions and, consequently, many economies — does not have a single business community. Rather, it has a variety of professional organizations and trade associations that represent chief executive officers, retailers, manufacturers, small business owners, farmers, and large and small companies.

Most of these organizations are involved with higher education in a variety of ways, including the service of their members as trustees of colleges and universities. Yet what is lacking in Ohio is a strategy for organizing the diverse business interests into a unified voice that can serve as a third partner — along with higher education and state government — for focusing on the integral role higher education can play in spurring economic growth.

Therefore, the Commission’s call for the creation of a private sector-led Ohio Business Alliance for Higher Education & the Economy must be an immediate priority. The Business Alliance, which would be launched by the Governor and the Ohio Business Roundtable in cooperation with other business organizations, would serve as the third partner in the three-way partnership among higher education, state government, and business leadership. Commission members encourage the Governor...
and the state’s business leaders to launch the Alliance in the second half of 2004.

FORGING THE COMPACT

Among the highest priorities for the Ohio Business Alliance for Higher Education & the Economy should be taking the lead in developing the kind of compact among higher education, the business community, and state government set forth in Recommendation 9. Appeals for more state higher education funding are likely to go unheeded unless they are linked to institutions’ efforts to restrain tuition increases and to increase academic and administrative productivity. In addition, such appeals are not likely to lead to measurable improvements unless they are reinforced by a fully engaged business community that is committed to providing the leadership needed to make it possible for more Ohioans obtain the knowledge and skills needed to succeed in the 21st century economy and to creating jobs through world-class research and technology commercialization.

It is essential that this compact become a living reality before the state’s next biennial budget process begins in early 2005, providing an opportunity for the compact to be included in the General Assembly’s budget discussions that will produce the FY 2006-2007 budget.

STOPPING THE LEAKS IN THE EDUCATIONAL PIPELINE

If Ohio is serious about building a competitive knowledge economy, it must improve the education of its citizens. Because the state’s education pipeline has leaks along its entire length, a P-16 approach to improving access and performance is needed.

Ohio already has the makings of a viable P-16 system, but much more needs to be accomplished. Before Ohio can provide more of its citizens with the postsecondary education they will need to succeed in the 21st century economy, the state must improve their academic preparation and lower the financial barriers to advanced learning. Additionally, it must give students at all levels a stronger foundation of mathematics and science skills, and it must improve students’ college experience by making it easier for them to apply to and transfer among Ohio’s colleges and universities.

Therefore, the Commission urges the Governor to take action before the end of 2004 to reconstitute, via executive order, the Joint Council, which was created by the State Board of Education and the Ohio Board of Regents; to rename the Joint Council the “Ohio P-16 Education Council”; and to designate it as the state’s primary P-16 advisory body. The Commission urges the new P-16 Education Council to encourage the creation of new regional P-16 councils.

The Commission voices strong support for implementing recently-legislated changes in course transfer and articulation (ORC 3333.16), applauds the Ohio General Assembly’s and the Ohio Board of Regents’ work in this area thus far, and encourages the Board of Regents to complete the work by the April 2005 deadline.

It is unreasonable to expect that the state can increase its competitiveness in today’s economy simply by producing more highly educated, highly skilled workers. There must be a simultaneous effort to generate the scientific breakthroughs and technological innovations that will create the jobs for which these people are being prepared.
There is a broad understanding that achieving higher education’s full potential to create more jobs and fuel economic growth is a big job. Commission members know that it will not be easy, nor will it be accomplished overnight.

MAXIMIZING WORLD-CLASS RESEARCH

The Commission calls upon the Ohio General Assembly to act quickly on Recommendation 5, which will motivate universities to reexamine internal priorities for the funding and quality of their graduate-level and professional programs. It will also grant authority to the Ohio Board of Regents to remove an institution’s authority to offer graduate-level and professional programs if the university’s internal priority setting and reallocations do not yield world-class, university-based research. The Commission urges all stakeholders to work collaboratively to ensure that the proposed Economic Growth Challenge is incorporated into the state’s FY 2006-2007 biennial budget as an essential first step toward increasing Ohio’s share of federal and industrial research funding.

STRENGTHENING ACCOUNTABILITY

Work should begin immediately on the development of a strategically focused accountability framework for higher education, including the adult workforce education system. The Ohio Board of Regents should lead a collaborative process for designing the accountability framework, which should include the new “Results Through Productivity Reports” proposed by the Commission in Recommendation 9 as well as a limited number of performance indicators that will communicate progress on achieving the goals of (a) providing more Ohioans with the knowledge and skills they need for success, and (b) creating more jobs and economic growth by strengthening higher education’s research base.

Refining the performance metrics and the process of accountability will be an ongoing, long-term process, but the work should begin immediately. A well-developed accountability system will be a vital tool for ensuring that the work of this Commission extends beyond this report. It will track progress on achieving state-level goals for higher education and the economy, signaling when Ohio is making progress on the dual goals of increasing educational attainment and creating more jobs for its citizens.

The work of the Governor’s Commission on Higher Education & the Economy was completed in its assigned timeframe of ten months. Achieving the goals advanced by the Commission will take years. The time to get started is now.
In meetings of both the full Commission and its committees, members addressed a wide range of questions that are not directly reflected in the recommendations contained in this document. What the Commission learned and how it handled some of these issues are summarized in the following questions and answers.

**Did the Commission consider the proposition that Ohio has too many institutions of higher education, and will the Commission recommend closing any institutions?**

In the higher education arena, former Ohio Governor James Rhodes is remembered not only for the creation of the Ohio Board of Regents but also for the proliferation of college and university facilities throughout the state to fulfill his promise of “a college within 30 miles of every Ohioan.” The view that Governor Rhodes’s legacy may have resulted in an oversupply of educational institutions for the state was included in the Commission’s deliberations. To gauge how to define “oversupply,” the Commission considered the number of colleges and universities in relation to population in Ohio *vis a vis* other states as well as the capacity needs for attaining the Commission’s goal of increasing participation in higher education by 30 percent over the next decade.

There are 13 public four-year campuses and 2 freestanding medical colleges in Ohio. The state has 24 community and technical colleges, 23 university branch campuses and 2 private two-year campuses. Ohio has 58 private, not-for-profit colleges. In addition, there are 2 national proprietary universities with locations in Ohio. The locations of these institutions of higher education are shown on the maps on pages 6-7 of this report.

The Ohio Board of Regents researched how Ohio compares with the rest of the nation in terms of the number of public institutions of higher education per capita. Campus data for 2000 showed that the national average is 0.38 two-year institutions and 0.22 four-year institutions per 100,000 population. With 0.33 public two-year colleges and 0.21 public four-year institutions per 100,000 population, Ohio is slightly below the national average.

The Commission’s bold goal of increasing higher education participation 30 percent over the next decade raises the question of whether Ohio’s educational institutions have enough capacity to meet that goal. To inform the Commission’s thinking about reaching such a goal, the Center for Urban and Regional Planning at Youngstown State University calculated enrollment projections on a county-by-county basis. The projections reveal dramatic enrollment increases for some regions of the state, which will be significant challenges that must be addressed if Ohio is to succeed in better educating more Ohioans.
Fortunately, the dramatic enrollment increases will not occur immediately, nor will they occur all at once. The enrollment increases are anticipated over a ten-year period. Long-term planning that includes reliance on all of Ohio’s higher education assets, including private colleges and universities, will be required to accommodate the recommended increases.

In addition, the Commission notes that capacity often can be increased without a significant expansion of bricks-and-mortar facilities. Some new buildings will undoubtedly be needed, but facilities expansion can be minimized by strategies for using all existing facilities to their maximum capacity and for coordinating the P-12 system with higher education. The practice of educational institutions closing or operating at reduced levels during winter and spring breaks, summers, weekends, evenings and, on some campuses, Friday afternoons, reduces the capacity for serving additional students. Building more bricks-and-mortar facilities that would be used on a similar time schedule would not be an effective long-term strategy for Ohio. Attention must be given to maximizing the use of the facilities that currently exist. Distance learning also can help in maximizing efficient use of facilities.

Better coordination and cooperation between the P-12 educational system and the higher education system can also temper the need for expansive growth of college and university campuses. Most Ohio high schools are unused during evenings, weekends, and summer months, and many of those facilities could serve as college classrooms. Cooperative arrangements between P-12 districts and institutions of higher education could provide additional capacity at costs that would be far less than those incurred for new buildings.

Better academic coordination across the P-16 continuum also could help address the need for increased space for higher education enrollment. Many P-12 districts in Ohio offer students an opportunity to obtain college-level skills and knowledge before high-school graduation. These opportunities must be expanded, and there must be assurances that the college credits earned during high school will not be repeated during college. Such “learning redundancy” would undermine the potential for better P-16 coordination to help Ohio achieve the goal of increased higher education enrollment without dramatic and unnecessary expansion of college and university facilities.

The Commission is not recommending closing any of Ohio’s colleges and universities, nor is it recommending a return to the 1960s strategy of aggressive proliferation and expansion of physical facilities as the principal solution for handling anticipated enrollment increases. In the spirit of the compact it is proposing, the Commission is calling on higher education, state government, and business leadership to work as partners to (a) ensure that the full array of educational institutions that do exist in Ohio are used to their maximum capacity and (b) address valid needs for capacity expansion that will allow Ohio to meet the goal of increasing enrollment by 30 percent over the next decade.

**Did the Commission look at the ways other states govern higher education and consider making fundamental changes here?**

In the early months of this Commission’s work, the idea of shifting to a state-level governing board was offered for consideration, and some local newspaper editorials urged the Commission to recommend stronger centralized control for the governance of public colleges and universities, which account for about 80 percent of higher education enrollment in Ohio.
The Commission learned about other states’ governance structures, which – in spite of idiosyncrasies – can be roughly classified into three broad categories: (a) strong local control, (b) coordination, and (c) strong centralization. Prior to 1963 Ohio’s state-level organization for higher education fell into the strong local-control category, with the Inter-University Council of Ohio, consisting of the presidents of the public four-year universities, serving as a voluntary coordinating body.

In his 1962 gubernatorial campaign, James Rhodes presented a “Blueprint for Brainpower” that called for the creation of a State Board of Regents for Higher Education that would be responsible for statewide higher education planning. During Governor’s Rhodes’s tenure, the Ohio General Assembly created the Board of Regents as Ohio’s state-level agency for higher education coordination.

Interestingly, some of the issues in the early 1960s that motivated the creation of the Board of Regents are similar to some of the issues that – 40 years later – this Commission confronted. In his “Blueprint for Brainpower,” Governor Rhodes emphasized the importance of a state-level coordinating body for “developing graduate research centers as necessary and vital instruments in the constant effort to maintain a strong competitive position for Ohio in the total economy.”

Consistent with this theme, the Governor was concerned about how to limit the proliferation of Ph.D. programs so that resources for supporting truly excellent graduate research centers would not be diluted by supporting multiple average or good centers. An important issue that confronted state policy makers in the early 1960s – and that state policy makers face again today – is how to accommodate dramatic increases in postsecondary enrollment.

The solution to these problems in the early 1960s was to strengthen state-level involvement in and coordination of higher education; therefore, it is not surprising that when similar issues arose in the early 2000s, one of the first suggestions for addressing them was to increase state-level control by creating a centralized governance structure that would replace or oversee the boards of trustees that currently govern individual institutions. The Commission ultimately concluded that a recommendation for a single, centralized governing board would not necessarily be a panacea.

Across the United States, about half of the states currently operate with a strong centralized governance structure for their systems of higher education. The fact that most of these states are grappling with many of the same questions about higher education and the economy as those Ohio is trying to answer suggests that strong centralized control is not per se a solution to the economic and educational challenges facing most states. In addition, concerns about the risk of dampening innovation in the bureaucratic environment of strong centralized control were expressed. Finally, observations of other states that have recently attempted or contemplated radical reform of higher education governance illustrate that far-reaching changes are typically accompanied by significant political upheaval that deflects attention from the problems that must be solved.

In their 2003 article, “The Politics of State Higher Education Governance Reform,” Michael K. McLendon and Erik C. Ness concluded that “the literature is replete with accounts of governance change that produced no discernible improvements in the quality, effectiveness or efficiency of systems.” Other major factors that weighed against recommending a radical shift to unified centralized control of higher education in Ohio were geography and history.
A policy audit conducted by the Education Commission of the States’ Center for Community College Policy at the request of the KnowledgeWorks Foundation described Ohio as a collection of “city-states,” a description the researchers heard from Ohioans themselves. Ohio’s large number of “city-states” (i.e., major metropolitan centers) and the vast differences in demography and economics among different regions within Ohio would present special, and perhaps intractable, barriers for a single, state-level governing board.

Historically, Ohio has maintained a strong tradition of local control and autonomy of education for both P-12 school districts and for institutions of higher education. Even when the Ohio General Assembly opted in the early 1960s to create a state-level Board of Regents, legislators created the institution as a balance to, not as a substitute for, the local control of colleges and universities by institutional boards of trustees. Although the Commission’s charge was to look toward the future and not the past, respect for Ohio’s history and traditions informed its work and helped it craft policy recommendations that are grounded in reality.

The current reality in Ohio is that the Board of Regents serves as the single, statewide coordinating board for all sectors of higher education. The powers and duties of the Board of Regents, as listed in Section 3333.04 of the Ohio Revised Code, include a mix of regulatory and advisory responsibilities.

The Ohio Board of Regents has regulatory authority to approve or disapprove the establishment of new branches or academic centers of colleges and universities and the offering of new degrees and degree programs at such institutions. The majority of the Regents’ responsibilities, however, are advisory. For example, Regents may recommend the elimination of graduate or professional programs because they constitute unnecessary duplication. The Regents also may recommend plans for state-financed capital expenditures, and plans for the design and funding of the state’s financial aid programs.

The Board of Regents’ powers and responsibilities are primarily advisory; therefore, the Ohio General Assembly sometimes confers authority on the Board of Regents to achieve specific aims. The most recent example is in the area of course and degree transfer among colleges and universities, where the legislature charged the Board of Regents with establishing policies and procedures on course transfer without unnecessary duplication or institutional barriers.

Specifically, the Ohio General Assembly directed that “Coursework completed within such a system at one state institution of higher education and transferred to another institution shall be applied to the student's degree objective in the same manner as equivalent coursework completed at the receiving institution.” (ORC 3333.16)

Although the Commission did not embrace the notion of a single, state-level governing board for higher education, the Commission did conclude that the Ohio Board of Regents needs continued authority for completing the work of articulation and transfer among public institutions of higher education and additional authority for influencing the availability of high-quality, non-duplicative graduate and professional degree programs throughout the state.
What is the Commission’s view with respect to the issue of caps on tuition?

The Commission does not take a position on tuition caps as an abstract proposition. For present purposes, the Commission has operated on the assumption that the Ohio General Assembly will continue to impose them in the near term. The Commission therefore has recommended three areas of relief: (a) voluntary tuition restraint as part of a compact among higher education, state government, and the business community; (b) limited additional increases where revenues are earmarked for defined strategic purposes (e.g., mathematics, science, engineering, or technology); and (c) exemptions for a limited number of colleges or universities that adopt some kind of “tuition certainty” program in which a student’s initial tuition would be frozen throughout his or her four- or five-year undergraduate career.

Nineteen states across the nation have enacted tuition freezes or limitations in recent years. Here in Ohio the imposition of tuition caps by the Ohio General Assembly involves a complex interplay of issues involving state funding, enrollment growth, and the caps. State funding (primarily through the State Share of Instruction) covers a substantial part of the costs of instruction for Ohio’s public colleges and universities. If, for example, state funding declines while costs continue to increase and tuition caps are imposed, then either the institutions must find additional outside revenues and/or increase productivity, or program quality will suffer.

Historically, there has been a negative correlation between the level of state support and the level of tuition caps: When state support is cut, the caps tend to be raised (or even eliminated); when state support increases significantly, the caps tend to be lowered. The Ohio Board of Regents supplied the Commission with the following summary of legislatively mandated tuition cap policies since FY 1990:

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 90 and FY 91</td>
<td>6% cap or $120, whichever is greater</td>
</tr>
<tr>
<td>FY 92</td>
<td>9% cap or $225, whichever is greater</td>
</tr>
<tr>
<td>FY 93</td>
<td>7% cap or $175, whichever is greater</td>
</tr>
<tr>
<td>FY 94 and FY 95</td>
<td>5% cap</td>
</tr>
<tr>
<td>FY 96 and FY 97</td>
<td>6% cap</td>
</tr>
<tr>
<td>FY 98 and FY 99</td>
<td>6% with additional limitations on campuses receiving Access Challenge funds</td>
</tr>
<tr>
<td>FY 00 and FY 01</td>
<td>6% for university main campuses and 3% for regional campuses, community colleges, and technical colleges. As a condition of receiving Access Challenge funds, qualifying institutions were subject to the following limitations: 0% in FY 00 and -5% in FY 01.</td>
</tr>
<tr>
<td>FY 02 and FY 03</td>
<td>No caps. The range of tuition increases during this time is presented below.</td>
</tr>
<tr>
<td>FY 04 and FY 05</td>
<td>6% for all institutions with the exception of 9% for The Ohio State University. However, an additional 3.9% increase is allowed if the proceeds of the increase are used for either “Access Scholarship grants” or to provide additional or improved technology services to students.</td>
</tr>
</tbody>
</table>

### Range of Tuition Increases by Sector When Tuition Caps Were Removed

<table>
<thead>
<tr>
<th>Sector</th>
<th>FY 02</th>
<th>FY 03</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Universities</strong></td>
<td>4.2% - 13.7%</td>
<td>8.6% - 15.7%</td>
</tr>
<tr>
<td><strong>University Branches</strong></td>
<td>0.0% - 9.6%</td>
<td>6.0% - 16.8%</td>
</tr>
<tr>
<td><strong>Community Colleges</strong></td>
<td>0.0% - 22.7%</td>
<td>4.0% - 18.8%</td>
</tr>
<tr>
<td><strong>Technical Colleges</strong></td>
<td>9.1% - 18%</td>
<td>6.8% - 18.4%</td>
</tr>
</tbody>
</table>

SOURCE: Ohio Board of Regents
Three general principles have been followed consistently in Ohio:

1. Fee caps have applied only to in-state undergraduate instructional and general fees. They have never been imposed on nonresident or graduate or professional fees.

2. Incidental charges such as transcript fees, lab fees, or parking fines have been exempt from fee caps.

3. Fee increases required as part of a campus’s legal obligations – generally those associated with a campus’s bonded indebtedness – have been exempt from fee caps. In the past, this exemption has been strongly promoted by bond experts.

Many people believe that as a practical matter, the tuition caps quickly become tuition “floors” because, in view of the unpredictability of state funding, institutions understandably want to generate as much tuition revenue as they can.

The Board of Regents historically has opposed state-imposed tuition caps primarily because in its view, the caps interfere with the ability of the boards of trustees of public colleges and universities to manage their institutions in the best interests of their students and their communities.

Can Ohio’s institutions of higher education reduce costs without jeopardizing (or while improving) the quality of learning?

This question raises productivity issues in two areas: learning productivity and administrative efficiency.

Learning Productivity

Too often calls for cost containment in education are interpreted as calls for compromising quality. When tight budgets require it, educational institutions are accustomed to employing traditional strategies for cost containment – increasing class size, reducing personnel, and making horizontal budget cuts. However, these strategies are often viewed as stop-gap measures to be employed only until fiscal resources increase.

This Commission is recommending not merely cost containment but increased learning productivity – i.e., maintaining or improving learning outcomes at reduced costs. The distinction is an important one. Attempting merely to employ temporary cost-cutting measures over the long-term may well erode educational quality, which is not a desired goal from any perspective. If Ohio succeeds in increasing participation, but does so by reducing educational quality, the victory will be hollow.

The tight public budgets of recent years have made elected officials’ calls for better application of business principles to the academic world particularly urgent. Some people, particularly academics, react negatively to the notion of applying the concepts of efficiency and productivity to the enterprise of teaching and learning because many academics feel called to the scholarly life for the pursuit of knowledge and truth, which is different from businesses’ pursuit of profit.

There are notable examples, however, of professionals within the academic world not only calling for improvements in learning productivity, but also providing examples of how such improvements can be achieved. Bruce Johnstone, the former Chancellor of the State University of New York (SUNY) system, argues that productivity within the academic world must come not from cheapening what academic institutions do, but by increasing the educational system’s ability to deliver the same or more educational quality for less money.

For improving learning productivity, Johnstone advocates strategies such as (a) reducing...
learning redundancy, which occurs when students take courses for which they already have the knowledge and skills; (b) modifying academic calendars, which are based on an agrarian economy, to match the demands of a knowledge economy that requires the opportunity for continuous learning on an anytime, anyplace basis; and (c) employing technology-aided learning, which increases students' opportunities to self-pace mastery of knowledge and skills. Johnstone maintains a Learning Productivity Network at the University of Buffalo (www.gse.buffalo.edu/org/lpn/) that links individuals working on strategies for increasing learning productivity.

A case study developed by Carol Twigg, Executive Director of the Center for Academic Transformation (CAT) at Rensselaer Polytechnic Institute (www.center.rpi.edu), illustrates how institutions of higher education can approach the challenge of increasing learning productivity. At the Maricopa Community College District, one of the nation's largest institutions of higher education with a student enrollment of 90,000 and more than 2,000 distinct courses, Vice Chancellor Ron Bleed analyzed the institution's academic program to find out where students were concentrated. The analysis revealed that 44 percent of the student enrollment at Maricopa is concentrated in just 25 courses. Put another way, about 1 percent of Maricopa's courses generate nearly half of its total enrollment. Bleed also discovered that the satisfactory completion rate for these courses was 64 percent. The attrition rate translated to a cost of more than $13 million per year spent on unsuccessful attempts at learning. Clearly the analyses revealed specific areas that could be targeted for improvements in learning productivity.

Twigg referred to the findings at Maricopa as "The 1 Percent Solution," emphasizing that when faced with the daunting task of increasing learning productivity, institutions can develop strategic approaches that will allow them to prioritize those courses that will yield the highest gains in learning productivity through reengineering. Originally funded by the Pew Charitable Trusts, Twigg and her colleagues at CAT worked with colleges and universities across the country to develop strategies for using instructional technologies in ways that would increase learning productivity. The models for course redesign developed through CAT are just one example of the kinds of innovations that can transform the teaching and learning enterprise and make it possible to educate more citizens at a lower dollar-for-dollar cost than we have in the past.

In his May 13, 2003, testimony before the U. S. House of Representatives Committee on Education and the Workforce, Frank Newman, former President of Rhode Island University and of the Education Commission of the States and now Director of the Futures Project at Brown University, explained some of the powerful traditions within the academic world that make the spread of these workable and needed changes difficult.

The first is that over the years higher education has become expert at fending off criticism by a now well-polished argument about the mystic and immeasurable aspects of liberal education that defy attempts to improve efficiency and increase productivity. A second is that the faculty reward structure in many institutions of higher education remains focused on scholarship and publication, not teaching. And, even in institutions that focus on teaching, the reward structure does not specifically promote increases in learning productivity. While we often criticize faculty for their lack of attention to the opportunities to improve the productivity of teaching and learning, Newman explained that they are simply acting in accordance with the culture of higher education.
The challenge of increasing learning productivity in Ohio’s colleges and universities is a formidable one. The Commission calls on elected officials, business leaders, boards of trustees, and higher education faculty and administrators to work in partnership to stimulate enthusiasm and motivation on our campuses for a renewed focus on teaching and learning – a focus that will lead to the application of known strategies for improving learning productivity where they are applicable and for creation of new innovations in teaching and learning where they are needed. If Ohio is to be known as a state that successfully uses innovation to fuel economic growth, then innovation in the academic arena – and the resulting gains in learning productivity – must be part of our strategy for achieving the bold goal of better educating many more Ohioans.

**Administrative Efficiency**

With regard to improving efficiency in the business aspects of higher education through institutional collaboration, there appears to be huge potential. Two outstanding examples of such cost-savings that the Commission reviewed are OhioLINK and the Five Colleges of Ohio.

OhioLINK is a statewide consortium of public and private college and university libraries and the State Library of Ohio that unifies the holdings of all the libraries through information technology and leverages the purchasing power of the individual members. Both public and private funding is used to support the OhioLINK services. Through OhioLINK, students, faculty, and staff at the 83 member institutions can access more than 31 million library items, 90 research databases and 5,000 scholarly journals online. The Ohio Board of Regents coordinated the university-led process that resulted in OhioLINK, which is recognized nationally as a model approach to providing cost-effective, high-quality library services.

The Five Colleges of Ohio is a consortium of private liberal arts institutions: The College of Wooster, Denison University, Kenyon College, Oberlin College and Ohio Wesleyan University. This consortium was created in 1995 through a grant from the Andrew W. Mellon Foundation that funded the development of a joint library system. The collaboration among the institutions has expanded beyond joint library operations and storage and includes both academic (e.g., foreign-language teaching) and administrative (e.g., insurance and employment practices) aspects of the campuses. The members of the Five Colleges of Ohio work together to improve educational effectiveness and gain financial efficiencies. The consortium is funded by the member institutions as well as through grants.

Early in its work, some members of the Commission considered a bold idea for Northeast Ohio, where there are public universities in four contiguous counties. This plan would have created an overarching Northeast Ohio University System into which each of the four entities would have put most of its administrative functions – purchasing, finance, legal, communications, and the like – but would have retained independence in various areas including sports and alumni relations. This idea proved to be too formidable for the times, but the four universities did initiate a serious study on their own of a Shared Service Alliance for Northeast Ohio Public Universities. Through this initiative, various administrative or “back office” functions such as course management systems, financial reporting, billing, payables, purchasing, payroll, portions of human resources and benefits, and student application processes (and potentially other student services such as registration) could be shared.

The start-up cost for Phase 1 of the proposal was estimated to be $10 million and the esti-
mated range of annual cost savings was 15 to 40 percent of operations. A major challenge facing such an ambitious program was recognized to be agreement on a common information technology infrastructure. This study was still ongoing when the Commission concluded its work, but the effort of the universities to develop such a major cost-saving mechanism on a collaborative basis is roundly applauded by the Commission. It was noted that the principles underlying the shared-services proposal could apply to other consortia throughout the state and perhaps even across public and private lines.

The Commission’s recommendations in Policy Option 9, strongly encouraging institutions to focus on improvements in administrative productivity, attest to the Commission’s belief that seldom will these types of changes jeopardize the quality of learning.

What is the history of Ohio’s investment in higher education?

Figures provided by the Ohio Legislative Service Commission on State General Revenue Fund (GRF) appropriations since 1990 show that, relative to other functions of state government, higher education has received the lowest priority from the state in terms of change in state spending. Specifically, the average annual change in state GRF appropriations (in constant 2000 dollars) between FY 1990 and FY 2003 is shown below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Appropriation</th>
<th>Annual % Change</th>
<th>Annual $ Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>$1,430.0</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>1991</td>
<td>$1,472.9</td>
<td>3.0%</td>
<td>$43</td>
</tr>
<tr>
<td>1992</td>
<td>$1,414.7</td>
<td>-4.0%</td>
<td>$(58)</td>
</tr>
<tr>
<td>1993</td>
<td>$1,378.6</td>
<td>-2.6%</td>
<td>$(36)</td>
</tr>
<tr>
<td>1994</td>
<td>$1,471.6</td>
<td>6.7%</td>
<td>$93</td>
</tr>
<tr>
<td>1995</td>
<td>$1,559.7</td>
<td>6.0%</td>
<td>$88</td>
</tr>
<tr>
<td>1996</td>
<td>$1,669.2</td>
<td>7.0%</td>
<td>$109</td>
</tr>
<tr>
<td>1997</td>
<td>$1,742.3</td>
<td>4.4%</td>
<td>$73</td>
</tr>
<tr>
<td>1998</td>
<td>$1,855.4</td>
<td>6.5%</td>
<td>$113</td>
</tr>
<tr>
<td>1999</td>
<td>$1,941.6</td>
<td>4.6%</td>
<td>$86</td>
</tr>
<tr>
<td>2000</td>
<td>$2,071.8</td>
<td>6.7%</td>
<td>$130</td>
</tr>
<tr>
<td>2001</td>
<td>$2,178.6</td>
<td>5.2%</td>
<td>$107</td>
</tr>
<tr>
<td>2002</td>
<td>$2,084.5</td>
<td>-4.3%</td>
<td>$(94)</td>
</tr>
<tr>
<td>2003</td>
<td>$2,060.0</td>
<td>-1.2%</td>
<td>$(25)</td>
</tr>
<tr>
<td>2004*</td>
<td>$2,067.0</td>
<td>0.3%</td>
<td>$7</td>
</tr>
<tr>
<td>2005*</td>
<td>$2,095.4</td>
<td>1.4%</td>
<td>$28</td>
</tr>
</tbody>
</table>


The following table and graph provide additional information about the history of Ohio’s investment in higher education.
How do Ohio’s investments in higher education compare with those of other states?

According to the Ohio Board of Regents’ 2003 Performance Report, in FY 2002 Ohio’s total government appropriations and net tuition funding per full-time equivalent student were $8,580, about five percent less than the national level of $8,992. Compared to the rest of the United States, Ohio has a mix of higher education funding that relies heavily on tuition revenue. Ohio ranks 44th in appropriations per student, 12th in net tuition per student, and 30th in overall funding per student. Ohio’s appropriations per student were $4,493, compared with the national level of $6,219.

Similarly, the state’s per capita spending for higher education was $194, compared with a national average of $225. And higher education spending per $100 of personal income was $6.74, or ten percent below the national average of $7.50.

In terms of funding for higher education, states vary in the way they treat operating versus capital dollars, and it is difficult to make accurate comparisons. Yet the Commission has been presented with information that suggests the combination of Ohio’s operating and capital spending for higher education, while ignoring other states’ capital dollars, would move Ohio no higher than 35th among the states. And if the capital appropriations of other states were taken into account, Ohio’s ranking might be considerably lower.

What portion of the state’s General Revenue Fund expenditures is targeted to higher education?

In Ohio’s FY 2004-2005 General Revenue Fund, approximately ten percent of total appropriations are targeted to higher education. The chart below shows the amount of appropriations from the General Revenue Fund for each of eight spending categories:

<table>
<thead>
<tr>
<th>Spending Category</th>
<th>FY 2004</th>
<th>% of Total</th>
<th>% Change</th>
<th>FY 2005</th>
<th>% of Total</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary and Secondary Education</td>
<td>$ 6,470.5</td>
<td>27.0%</td>
<td>3.3%</td>
<td>$ 6,643.0</td>
<td>26.8%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Higher and Other Education</td>
<td>$ 2,492.5</td>
<td>10.4%</td>
<td>1.2%</td>
<td>$ 2,533.0</td>
<td>10.2%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Medicaid</td>
<td>$ 8,840.0</td>
<td>36.9%</td>
<td>10.4%</td>
<td>$ 9,305.6</td>
<td>37.5%</td>
<td>5.3%</td>
</tr>
<tr>
<td>Other Health and Human Services</td>
<td>$ 2,943.4</td>
<td>10.4%</td>
<td>4.4%</td>
<td>$ 2,982.5</td>
<td>10.3%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Public Safety and Protection</td>
<td>$ 1,734.6</td>
<td>7.2%</td>
<td>4.1%</td>
<td>$ 1,760.4</td>
<td>7.1%</td>
<td>1.5%</td>
</tr>
<tr>
<td>General Government &amp; Tax Relief</td>
<td>$ 1,623.5</td>
<td>6.8%</td>
<td>3.6%</td>
<td>$ 1,698.1</td>
<td>6.8%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Environment, Development and Transportation</td>
<td>$ 462.2</td>
<td>1.9%</td>
<td>4.4%</td>
<td>$ 477.4</td>
<td>1.9%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Executive, Legislative and Judicial</td>
<td>$ 305.6</td>
<td>1.3%</td>
<td>7.2%</td>
<td>$ 314.2</td>
<td>1.3%</td>
<td>2.8%</td>
</tr>
<tr>
<td><strong>Total General Revenue Fund</strong></td>
<td>$23,972.3</td>
<td>100.0%</td>
<td>5.8%</td>
<td>$24,814.4</td>
<td>100.0%</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

Numbers may not add to total due to rounding. SOURCE: Ohio Office of Budget and Management, July 2003
In Ohio, what portion of public colleges’ and universities’ operating budgets is provided by state support?

### Institutional Operating Budgets, and State and Local Support, FY 2002

<table>
<thead>
<tr>
<th>University/Campus</th>
<th>Operating Budget 1</th>
<th>State Support 2</th>
<th>Local Levy Support 3</th>
<th>State Support as % of Operating Budget</th>
<th>State &amp; Local Support as % of Operating Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIVERSITY OF AKRON</td>
<td>$302,433,379</td>
<td>$97,094,683</td>
<td>$0</td>
<td>32.1%</td>
<td>32.1%</td>
</tr>
<tr>
<td>BOWLING GREEN</td>
<td>$295,988,179</td>
<td>$95,182,505</td>
<td>$0</td>
<td>28.8%</td>
<td>28.8%</td>
</tr>
<tr>
<td>BOWLING GREEN</td>
<td>$295,988,179</td>
<td>$95,182,505</td>
<td>$0</td>
<td>28.8%</td>
<td>28.8%</td>
</tr>
<tr>
<td>CENTRAL STATE</td>
<td>$43,965,408</td>
<td>$18,817,125</td>
<td>$0</td>
<td>42.8%</td>
<td>42.8%</td>
</tr>
<tr>
<td>UNIV. CINCINNATI</td>
<td>$712,298,500</td>
<td>$193,161,277</td>
<td>$0</td>
<td>27.1%</td>
<td>27.1%</td>
</tr>
<tr>
<td>CLEVELAND ST.</td>
<td>$195,004,714</td>
<td>$74,081,585</td>
<td>$0</td>
<td>38.0%</td>
<td>38.0%</td>
</tr>
<tr>
<td>KENT STATE</td>
<td>$376,197,657</td>
<td>$120,543,095</td>
<td>$0</td>
<td>32.0%</td>
<td>32.0%</td>
</tr>
<tr>
<td>MCOT</td>
<td>$88,287,403</td>
<td>$35,908,884</td>
<td>$0</td>
<td>40.3%</td>
<td>40.3%</td>
</tr>
<tr>
<td>Miami University</td>
<td>$349,864,317</td>
<td>$82,734,319</td>
<td>$0</td>
<td>23.6%</td>
<td>23.6%</td>
</tr>
<tr>
<td>NEOUCOM</td>
<td>$33,550,659</td>
<td>$18,357,559</td>
<td>$0</td>
<td>54.7%</td>
<td>54.7%</td>
</tr>
<tr>
<td>OHIO STATE</td>
<td>$1,538,611,459</td>
<td>$440,598,214</td>
<td>$0</td>
<td>28.6%</td>
<td>28.6%</td>
</tr>
<tr>
<td>OHIO UNIVERSITY</td>
<td>$438,014,697</td>
<td>$143,959,395</td>
<td>$0</td>
<td>32.9%</td>
<td>32.9%</td>
</tr>
<tr>
<td>SHAWNEE ST.</td>
<td>$40,212,516</td>
<td>$14,023,513</td>
<td>$0</td>
<td>34.9%</td>
<td>34.9%</td>
</tr>
<tr>
<td>UNIVERSITY OF TOLEDO</td>
<td>$32,982,786</td>
<td>$83,175,511</td>
<td>$0</td>
<td>26.4%</td>
<td>26.4%</td>
</tr>
<tr>
<td>WRIGHT STATE</td>
<td>$251,424,107</td>
<td>$100,002,945</td>
<td>$0</td>
<td>39.8%</td>
<td>39.8%</td>
</tr>
<tr>
<td>YOUNGSTOWN ST.</td>
<td>$141,127,260</td>
<td>$46,887,147</td>
<td>$0</td>
<td>33.2%</td>
<td>33.2%</td>
</tr>
<tr>
<td>SUBTOTAL</td>
<td>$5,100,063,039</td>
<td>$1,554,199,957</td>
<td>$0</td>
<td>30.5%</td>
<td>30.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Community Colleges</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CINCINNATI STATE</td>
<td>$54,611,464</td>
<td>$20,370,665</td>
<td>$0</td>
<td>37.3%</td>
<td>37.3%</td>
</tr>
<tr>
<td>CLARK STATE</td>
<td>$20,153,819</td>
<td>$7,145,912</td>
<td>$0</td>
<td>35.5%</td>
<td>35.5%</td>
</tr>
<tr>
<td>COLUMBUS STATE</td>
<td>$112,469,921</td>
<td>$42,058,900</td>
<td>$0</td>
<td>37.4%</td>
<td>37.4%</td>
</tr>
<tr>
<td>CUYAHOGA</td>
<td>$167,979,198</td>
<td>$44,469,248</td>
<td>$49,703,454</td>
<td>26.5%</td>
<td>56.1%</td>
</tr>
<tr>
<td>EDISON STATE</td>
<td>$15,550,727</td>
<td>$6,216,006</td>
<td>$0</td>
<td>40.0%</td>
<td>40.0%</td>
</tr>
<tr>
<td>JEFFERSON</td>
<td>$9,507,897</td>
<td>$3,773,196</td>
<td>$1,084,433</td>
<td>39.7%</td>
<td>51.1%</td>
</tr>
<tr>
<td>LAKELAND</td>
<td>$51,259,443</td>
<td>$15,254,644</td>
<td>$9,894,024</td>
<td>29.8%</td>
<td>49.1%</td>
</tr>
<tr>
<td>LORAIN COUNTY</td>
<td>$262,940,081</td>
<td>$13,712,651</td>
<td>$9,331,000</td>
<td>21.8%</td>
<td>31.8%</td>
</tr>
<tr>
<td>NORTHWEST STATE</td>
<td>$17,589,297</td>
<td>$6,676,895</td>
<td>$0</td>
<td>38.0%</td>
<td>38.0%</td>
</tr>
<tr>
<td>OWENS STATE</td>
<td>$77,217,731</td>
<td>$36,687,023</td>
<td>$0</td>
<td>47.5%</td>
<td>47.5%</td>
</tr>
<tr>
<td>RIO GRANDE</td>
<td>$9,530,353</td>
<td>$4,273,575</td>
<td>$885,434</td>
<td>44.8%</td>
<td>53.9%</td>
</tr>
<tr>
<td>SINCLAIR</td>
<td>$117,977,175</td>
<td>$40,219,932</td>
<td>$21,438,306</td>
<td>34.1%</td>
<td>52.3%</td>
</tr>
<tr>
<td>SOUTHERN STATE</td>
<td>$16,805,657</td>
<td>$3,529,447</td>
<td>$0</td>
<td>20.9%</td>
<td>20.9%</td>
</tr>
<tr>
<td>TERRA STATE</td>
<td>$15,511,114</td>
<td>$6,399,861</td>
<td>$0</td>
<td>41.2%</td>
<td>41.2%</td>
</tr>
<tr>
<td>WASHINGTON STATE</td>
<td>$14,205,222</td>
<td>$4,770,836</td>
<td>$0</td>
<td>33.6%</td>
<td>33.6%</td>
</tr>
<tr>
<td>SUBTOTAL</td>
<td>$763,409,109</td>
<td>$255,548,761</td>
<td>$89,316,651</td>
<td>33.5%</td>
<td>45.2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technical Colleges</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BELMONT TECH</td>
<td>$11,416,614</td>
<td>$4,707,145</td>
<td>$0</td>
<td>42.0%</td>
<td>42.0%</td>
</tr>
<tr>
<td>CENTRAL OHIO</td>
<td>$11,972,847</td>
<td>$3,671,788</td>
<td>$0</td>
<td>30.2%</td>
<td>30.2%</td>
</tr>
<tr>
<td>HOCKING</td>
<td>$43,296,367</td>
<td>$17,462,581</td>
<td>$0</td>
<td>40.3%</td>
<td>40.3%</td>
</tr>
<tr>
<td>JAMES RHODES ST.</td>
<td>$19,087,802</td>
<td>$7,488,622</td>
<td>$0</td>
<td>37.7%</td>
<td>37.7%</td>
</tr>
<tr>
<td>MARION TECH</td>
<td>$9,419,037</td>
<td>$3,975,167</td>
<td>$0</td>
<td>38.0%</td>
<td>38.0%</td>
</tr>
<tr>
<td>MUSKINGUM</td>
<td>$16,416,532</td>
<td>$6,146,372</td>
<td>$0</td>
<td>37.4%</td>
<td>37.4%</td>
</tr>
<tr>
<td>NORTH CENTRAL</td>
<td>$18,519,865</td>
<td>$7,147,786</td>
<td>$0</td>
<td>38.6%</td>
<td>38.6%</td>
</tr>
<tr>
<td>STARK STATE</td>
<td>$27,924,921</td>
<td>$11,264,056</td>
<td>$0</td>
<td>40.3%</td>
<td>40.3%</td>
</tr>
<tr>
<td>SUBTOTAL</td>
<td>$158,553,985</td>
<td>$61,499,517</td>
<td>$0</td>
<td>38.7%</td>
<td>38.7%</td>
</tr>
<tr>
<td><strong>STATEWIDE TOTAL</strong></td>
<td><strong>$6,022,326,133</strong></td>
<td><strong>$1,871,248,235</strong></td>
<td><strong>$89,316,651</strong></td>
<td><strong>31.1%</strong></td>
<td><strong>32.6%</strong></td>
</tr>
</tbody>
</table>

Source: HEI database, FY 2002 institutional financial reports.

1. Operating budget reflects total operating expenditures (excludes hospital expenditures for OSU and MCOT).
2. State support includes all state subsidy for operating purposes only. State capital appropriations and student financial aid dollars are not included here.
3. Local levy support includes local tax appropriations available for local community colleges only (state community colleges do not have the ability to levy local property taxes).
How is higher education funded in Ohio?

In addition to capital appropriations, the state provides operating dollars to help fund colleges and universities and to provide student support.

The state’s underlying strategy for the support of higher education has evolved over many decades. Ohio’s current higher education funding formula is complicated and reflects a negotiated mixture of various goals and purposes. Currently the state’s funding strategy includes the following components:

1. State Share of Instruction (SSI) - $1.534 billion in FY 2004, which is unrestricted operating support allocated among the state’s public colleges and universities by the Ohio Board of Regents pursuant to a formula based on statewide average costs per full-time equivalent student by discipline and level of instruction for various types of credit and remedial courses and on the number of enrollments. In a typical year (FY 2003), the SSI comprised about 63 percent of all General Revenue Funds that were appropriated for higher education, or 92 percent of the core institutional support (i.e., excluding financial aid, debt service, and the like).

2. A series of performance-based funding “Challenges” designed to incentivize conduct that helps to carry out defined state goals.¹

   Access Challenge - $67.6 million in FY 2004 to restrain fees and increase access at the state’s two-year community and technical colleges; at two-year programs at the University of Cincinnati, University of Akron, and Youngstown State University; and at three of the state’s four-year universities: Central State University, Cleveland State University, and Shawnee State University.

   Success Challenge - $51.1 million in FY 2004 to increase degree attainment at the state’s four-year universities, with special emphasis on at-risk students.

   Jobs Challenge - $9.3 million in FY 2004 to make workforce training programs at the state’s two-year community and technical colleges more affordable.

   Research Challenge - $18.3 million in FY 2004 to increase and improve basic research activity and output at the state’s four-year research universities.

   Eminent Scholars Program - $1.5 million in FY 2005 (the program is generally funded every other year) to attract and retain world-class university scholars.

State Grant and Scholarship Programs

- Ohio Instructional Grants - $111,966,343 in FY 2004 to provide need-based tuition assistance to Ohio undergraduates from low- and moderate-income families.

- Ohio Student Choice Grants - $52,139,646 in FY 2004 to assist Ohio baccalaureate students in Ohio private colleges and universities.

- Ohio Academic Scholarships - $7,800,000 in FY 2004 to provide assistance to academically outstanding high-school graduates in Ohio schools.

- Ohio War Orphans Scholarship - $4,672,321 in FY 2004 to provide tuition assistance to Ohio children of deceased or severely disabled veterans in eligible Ohio schools.

- Seven Other Programs - $31,666,908 in FY 2004 for Part-Time Student Instructional Grants, Regents Graduate/Professional Fellowships, Ohio Safety Officers College Memorial Fund, Nurse Education

¹These funding levels do not reflect the budget cuts announced by Governor Taft in March 2004 for the remainder of the current biennium, which will affect some but not all of the programs listed above.
Assistance Loans, Student Workforce Development Grants, Ohio National Guard Scholarships, and Ohio Physician and Loan Repayment.

3. “Hold-Harmless Guarantee” designed to guarantee a campus at least the same amount of funding it received in the previous year, irrespective of its enrollment levels.

4. “Tuition Tax Deduction” that allows qualified taxpayers to receive a deduction of up to $2,500 per year for the first two years of post-secondary education tuition. The estimated historical and future value of the Tuition Tax Deduction are provided in the following table:

| Estimated Historical and Future Value of Tuition Tax Deduction for All State Funds (in Millions) |
|---------|---------|---------|---------|---------|---------|
| $21.50  | $23.10  | $24.80  | $26.00  | $28.74  | $31.78  |

Source: Ohio Department of Taxation

In general, the Commission tended to urge that funding mechanisms be aligned more closely with the economic needs and priorities of the state and that future funding increases be linked to increases in gains in learning and research productivity.

Finally, there are several references in the Commission’s Report to the Higher Education Funding Commission (HEFC). This is a body comprising 27 members who are broadly representative of the Ohio Board of Regents and the various public institutions of higher education, along with representatives from the executive and legislative branches of state government. The HEFC reviews and evaluates funding mechanisms and makes recommendations for change. The Commission’s consultant on funding mechanisms concluded that the HEFC is a sound organizational approach to higher education funding in Ohio.

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**Did the Commission consider permitting nonresidents of Ohio to serve as trustees of the state’s public universities?**

The general consensus among members of the Commission is that a limited number of nonresidents of Ohio should be allowed to serve as trustees of the state’s public four-year universities. However, state universities in Ohio are deprived of the opportunity to have nonresident trustees due to a 1904 decision of the U.S. Supreme Court, Thomas v. Board of Trustees, 195 U.S. 207, which found that the position of trustee of Ohio State University is an “office” within the meaning of Ohio Constitution Art. XV, Sec. 4, which states that “No person shall be elected or appointed to any office unless possessed of the qualifications of an elector.” (Art. V, Sec. 1 of the Ohio Constitution provides that an “elector” must be, *inter alia*, a “resident” of the state.)

Whether the courts would reach the same conclusion in a properly presented case today is debatable but, as a practical matter, probably moot. The unfortunate legal bar to selection of nonresident trustees, which limits the opportunities of public universities to benefit from nonresidents’ leadership and expertise, could theoretically be changed by constitutional amendment, but such a procedure, if dealing only with that one issue, would be unduly costly in relation to the potential benefit. The Commission considered whether such a change could be included in the agenda of the next Constitutional Convention contemplated for the year 2012 by Art. XVI, Sec. 3 of the Ohio Constitution.

The Commission believes that in the interim, the Governor could, in consultation with university presidents, appoint two nonvoting, nonresident trustees to serve in advisory roles on the boards of those institutions. Upon ratification of the constitutional change, the interim gubernatorial power to appoint nonvoting nonresidents would no longer be needed.
In view of the Commission’s recommendation that the Ohio General Assembly consider eliminating the requirement for colleges and universities to use multiple prime contractors in their capital projects, why didn’t the Commission also call for the elimination of prevailing wage rates on campus construction projects?

Clearly the Commission believes that achieving greater efficiencies and productivity gains should be a priority of all public colleges and universities in Ohio, and this priority is reflected in a number of the policy recommendations contained in this report. It is the basis for the Commission’s call for academic and administrative pilot projects designed to increase learning productivity and bring greater efficiency to campus “back-office” operations. This belief also is the driving force behind the Commission’s call for strengthened accountability structures and consideration of the elimination of mandates that campuses use multiple prime contractors in their capital projects.

During the course of their deliberations, Commission members talked about a broader range of actions that could be taken to cut costs and improve the performance of all campuses, and one of those issues involved the elimination of prevailing wage rates that are now required by state law. As the Commission considered this issue, it became clear that time did not permit the full exploration of this recommendation that its supporters and detractors deserved.
The Commission’s Work: Expertise and Resources

The Commission benefited from the knowledge and experiences of experts in Ohio and across the nation. The following individuals, listed alphabetically, made presentations to the Commission or its committees:

John Adams, Honda of America Mfg., Inc.
*Donna Alvarado, Ohio Board of Regents
Ron Amstutz, Ohio Senate
John A. Bantle II, Ohio University
Richard E. Baznik, Case Western Reserve University
Katherine Boswell, Education Policy Associates
Anthony Carnevale, Educational Testing Service
*Carol Cartwright, Kent State University
*Roderick G. W. Chu, Ohio Board of Regents
*Roy Church, Lorain County Community College
Mark E. Coticchia, Case Western Reserve University
David Creamer, Kent State University
Daniel J. Curran, University of Dayton
Paolo DeMaria, Ohio Governor’s Office
Tony Dennis, Omeris, Inc.
Dan DiBiasio, Wilmington College
Matthew Filipic, Wright State University
Allen H. Ford, Case Western Reserve University
Darrell Glenn, Ohio Board of Regents
Paul Harrington, Center for Labor Market Studies, Northeastern University
*Karen Holbrook, The Ohio State University
Shane Hollett, Ohio College Access Network
Joseph Jacomet, Battelle
Howard E. Jackson, University of Cincinnati
Carolyn Jarmon, Center for Academic Transformation, Rensselaer Polytechnic Institute
Dan Johnson, University of Toledo
*Bruce Johnson, Ohio Department of Development
Joseph Johnson, Ohio Department of Education
Steven Lee Johnson, Sinclair Community College
Christian Ketels, Institute for Strategy & Competitiveness, Harvard Business School
Rich Kiley, Ohio Business Roundtable
Paul Lingenfelter, State Higher Education Executive Officers
Luke McCormick, Ohio Workforce Policy Board
John McGrath, Stark State College of Technology
Mary McKeown-Moak, MGT of America, Inc.
Tina Milano, National College Access Network and Ohio College Access Network
Gerry Moersdorf, Applied Innovations, Inc.
Larry Morgan, Stark County Educational Service Center
Tom Mortenson, Postsecondary Education OPPORTUNITY
Frank Newman, The Futures Project
*Tom Noe, Ohio Board of Regents
Richard Novak, Association of Governing Boards of Colleges and Universities
Adrienne O’Neill, Stark Education Partnership
Anthony J. Perzigian, University of Cincinnati
Rich Petrick, Ohio Board of Regents
Ronald Phipps, Institute for Higher Education Policy
Stephen R. Portch, Front Porch Educational Services
Luis M. Proenza, University of Akron
Jack Rayburn, Minnesota Higher Education Services Office
W. Don Reader, Stark Education Partnership
Joseph Rochford, Stark Education Partnership
Fred Sanfilippo, The Ohio State University
Jean Scott, Marietta College
Richard Stoff, Ohio Business Roundtable
Nancy Shulock, Institute for Higher Education Leadership & Policy
Dixie Sommers, Center for Human Resource Research, The Ohio State University
Jon Tafel, Ohio Board of Regents
Bob Taft, Ohio Governor
Ward J. Timken, The Timken Company and The Ward J. and Joy A. Timken Foundation
Jim Trakas, Ohio House of Representatives
Garrison Walters, Ohio Board of Regents
Thomas Waltermire, PolyOne Corporation
Doug White, Ohio Senate
Chad Wick, KnowledgeWorks Foundation
David Winwood, The Ohio State University
*Ron Wright, Cincinnati State Technical & Community College
Nancy L. Zimpher, University of Cincinnati

The staff of the Ohio Department of Budget and Management provided financial data, and Director Tom Johnson provided invaluable counsel and support on administrative and fiscal matters.

The staff of the Ohio Department of Education provided information about the P-12 education system and conducted analyses on the projected costs of initiatives that were considered. Special thanks to Claudia Speakman and Jeannette Oxender.

The Commission also is grateful for the research support provided by the following individuals:
Mary-Scott Cebul, independent consultant
Paul Harrington, Center for Labor Market Studies, Northeastern University
Neal Johnson, Association of Governing Boards of Colleges and Universities
John Bralich, Thomas Finnerty, Jr., and Thomas Maraffa, Center for Urban & Regional Studies, Youngstown State University
Mary McKeown-Moak, MGT of America, Inc.
Lu Phillips, Lorain County Community College
Dixie Sommers, Center for Human Resource Research, The Ohio State University
Gregory M. Stoup, independent consultant

* Member of the Commission

The Commission is grateful for the support provided by several state agencies:

The staff of the Ohio Board of Regents provided data analyses, research support, and administrative assistance. Special thanks to Garry Walters, Rich Petrick, and Darrell Glenn.

The Ohio Department of Development housed the Commission office and provided significant in-kind support. Special thanks to Director Bruce Johnson, Daryl Hennessy, and Norm Chagnon.
IUC-OACC Joint Statement

Richard W. Pogue, Chair
Governor’s Commission on Higher Education & the Economy
77 South High Street, 29th Floor
Columbus, Ohio 43215-6130

March 26, 2004

Dear Chairman Pogue,

The Inter-University Council (IUC) and the Ohio Association of Community Colleges (OACC) are pleased to offer a joint statement to the Governor’s Commission on Higher Education & the Economy.

This statement reflects a consensus of public post-secondary education in Ohio. We offer this in the spirit of the Commission seeking to form new compacts among higher education, the P-12 education system, state government and the business community. We understand a compact to be an agreement among the parties, and so we offer the following commitments to our partners to help in achieving the goal of the Governor and the Commission.

We fully embrace and applaud the Governor’s goal of dramatically increasing post-secondary participation in Ohio as a means of improving lives, stimulating the economy, and enriching our communities. We believe that the goal of moving Ohio from among the lowest states for post-secondary participation to being among the top ten states is ambitious but ultimately attainable if all the partners work together for this common goal. More specifically, we commit to working with our partners to have 780,000 Ohioans participating in postsecondary education by 2015; this represents an increase of 180,000 students or approximately 30%. We believe that the nature of the new economy demands that we do so.

We believe that all public and private colleges and universities will need to play a role in achieving this ambitious goal. However, based on Ohio’s demographics, we anticipate that a significant majority of the increase will be served by the community colleges, technical colleges, university branch campuses, and urban access universities. Many individuals are likely to have financial, family and other circumstances that will make these institutions, because of their location, accessibility, price and types of degrees and programs offered, an ideal pathway either to the baccalaureate degree or the world of work.

We enthusiastically endorse the Commission’s thinking on a major, sustained, decade long marketing campaign – funded by both private and public dollars – that will help those who currently do not aspire to any form of higher education to see the benefits of doing so and to help Ohioans see the connection between a higher education and economic prosperity.

We also believe that simply participating in post-secondary education is not sufficient. We want Ohioans to have lifelong access to post-secondary education. We must create seamless pathways from P-12 to post-secondary through rigorous academic preparation of students and proactive partnerships between P-12 schools and colleges at both the regional and state level. We must also
create seamless pathways among post-secondary institutions. We want to put students first. Their needs, not the needs of systems or institutions, should always be our starting point. At the same time, our policies and practices must always be predicated on measurable student success. We support the recent legislative initiatives that seek to maximize and facilitate the transfer of students from one institution to another. We further commit to go even further by:

Exploring the creation of pilot statewide “ladder” programs in key areas of the state’s economic interests. For example, we could examine the feasibility of a statewide articulated ladder program in information technology. In such a program, a student, from day one, could see how a certificate in IT could ladder to an associate degree, to a bachelor's degree, to a master’s degree, to a Ph.D. – with each rung of the ladder being possible at different public institutions. This is consistent with our philosophy that students should aspire to the highest levels that their talents and our teaching can take them.

We believe that achieving the participation and success goals can be accomplished only through new and vigorous partnerships. The partnerships between P-12 and post-secondary education will need to be significantly expanded. We realize we must do even more to build trust and a shared vision with state government, including our commitment to consider every reasonable approach to increased effectiveness and efficiency. We would hope that this shared vision and trust could lead state government to improving certain structures (e.g., statutory status for the Joint Council) and increasing its investment so that we can meet the ambitious participation goal in a quality way. We would also hope that the state’s business community would see that this vision, and our commitment to it, is worthy of their involvement as they look to us to educate good citizens and a productive workforce for Ohio.

Finally, we believe that every opportunity brings with it challenges. Increasing our state’s education level to the extent we believe is necessary will challenge our physical capacity (buildings), our funding levels, our faculty and staff levels and so on. While we cannot diminish these realities, we choose not to dwell on them. We look to our partnerships for solutions, confident that solutions must be found because we, and all of Ohio, cannot afford not to be among the most highly education states in the nation.

We thank you for the opportunity to provide you with this joint statement of our commitments to the Commission and look forward to further conversations with the Commission and our partners.

Sincerely,

Thomas M. Brown, Trustee
Terra Community College
Chairperson, Ohio Association of Community Colleges

David C. Sweet, President
Youngstown State University
Chair, Inter-University Council
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